

VOICE OVER INTERNET PROTOCOL (VoIP)

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

FEBRUARY 24, 2004

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

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VOICE OVER INTERNET PROTOCOL (VoIP)

TUESDAY, FEBRUARY 24, 2004

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 9:33 a.m. in room SR-253, Russell Senate Office Building, Hon. John McCain, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. JOHN MCCAIN, U.S. SENATOR FROM ARIZONA

The CHAIRMAN. Good morning. Today, the Committee examines voice over Internet protocol, or VoIP, a technology that enables voice to be carried over the Internet. While this technology is not new, recent advances have enhanced the quality of voice services delivered using Internet protocol such that VoIP may now be competitive with traditional telephone services.

VoIP holds the promise of unleashing many new competitors for a voice service that was once the province of a regulated monopoly. Numerous large communications companies have announced plans to offer voice services using Internet protocol; likewise, many smaller entrepreneurial companies have begun offering these services, posing another challenge to established providers of telephone service.

Numerous state regulatory agencies have made announcements of their own, expressing an interest in regulating these services. And the FCC recently launched a proceeding to examine the appropriate treatment of this technology.

In many ways, VoIP is a microcosm of the broad array of telecommunications regulatory issues that have been debated since the passage of the Telecommunications Act of 1996, including the role of state regulators, the legal classification of services, universal service, access charges, emergency services, and access by people with disabilities. It's been nearly 8 years since the passage of the 1996 Telecommunications Act.

In that time, the telecommunications industry, the technology it relies on, and the services it offers have all changed dramatically. The Internet has changed the world and the way we communicate. And yet we continue to regulate the telecommunications industry under the confines of an outdated statutory regime that has been rendered largely obsolete by technology. VoIP is a case in point. The FCC is forced to shoehorn a newly emerging technology into Congress's 1996 vision of communications regulation, and to classify, as either fish or fowl, that which may be neither.

Sponsors of the Telecommunications Act will undoubtedly herald VoIP, and the potential competition that may result, as the product of their legislative efforts. But the truth is that the emergence of VoIP has very little to do with the pages and pages of law written by lobbyists or the thousands of regulations spawned by the Telecommunications Act. VoIP is born out of advances in technology, something that is nearly impossible to regulate.

We began the 108th Congress with a hearing on the state of competition in the industry, and I reminded the public, the FCC Commissioners, and my colleagues that, in my long-held beliefs, that the 1996 Act is a fundamentally flawed piece of legislation. Since then, some of my colleagues have joined me in expressing the need for Congress to take a serious look at reforming the Act. We begin that examination today with a look at VoIP, one example of the new and emerging technologies and services that increasingly blur the lines drawn in the legislation. This is the first in a series of hearings the Committee will conduct this year reassessing the assumptions on which the Act was drafted.

Finally, I note that two of the important issues that will be discussed today are the applicability to VoIP of certain requirements related to providing access to services by people with disabilities, and requirements related to emergency services, like 911.

Yesterday, I received a letter from Andrew Imparato, President of the American Association of People With Disabilities, stressing the importance that, "our nation's more than 56 million Americans with disabilities will be able to share equally in the benefits of VoIP." Likewise, I received letters from the Association of Public Safety Communications officials and the National Emergency Number Association stressing concerns related to VoIP and the Nation's 911 emergency calling system. I thank these parties for their interest, and move to have these letters submitted to the record.

I thank FCC Chairman Powell and other witnesses for being here today, and I look forward to their testimony on these important and timely issues.

Senator Wyden?

**STATEMENT OF HON. RON WYDEN,
U.S. SENATOR FROM OREGON**

Senator WYDEN. Thank you, Mr. Chairman. And I very much appreciate your holding this hearing today.

I think in addition to the points that you've correctly made with respect to the Telecommunications Act and the effect of VoIP on that statute, I think to some extent today's discussion is a continuation of the debate that began in this room 7 years ago when I introduced the Internet Tax Freedom bill.

Then, as now, it seems to me there are two competing approaches. There is one approach that sees the Internet and related technologies as critical to the country's well-being, and especially our ability to create good-paying jobs. Then there's an alternative approach—it's one that is supported by some state and local officials—which essentially sees the Net and related technologies as the last cash-cow in the pasture, one to be taxed and regulated.

And just as I argued 7 years ago, with respect to the Internet and taxation, I would hope that we would tread lightly with respect

to regulating voice-over. And I'd suggest that for two reasons. First, the dire prognostications that so many state and local officials made with respect to the Internet and taxation 7 years ago simply have not come true.

I'd like to enter into the record, for example, Mr. Chairman, a publication from the National Governors Association, of October 27, 1997, where they said the proposed six- to eight-year moratorium on state and local taxes would cause a virtual collapse in state and local revenues. Can I have that entered into the record, at this point?

The CHAIRMAN. Without objection.

Senator WYDEN. Thank you, Mr. Chairman.

And I think as we go forward with this discussion, we are going to hear many of the same arguments with respect to both regulating and taxing voice-over that we heard 7 years ago in this room, on the Internet. We didn't see, 6, 8 years ago, the collapse of the traditional economy, in malls and the like, as a result of what we did in the Internet tax area, nor are we going to see it if we tread lightly in an area that has so much promise for the economy.

One other point I hope that we will recognize is that VoIP doesn't offer a new pipe into consumer homes; instead, it rides on existing broadband facilities. And as we create this important communications alternative, it seems to me we have a chance to create many jobs as broadband is developed. And if broadband isn't available at an affordable price, neither will be voice-over.

So I look forward to these hearings. I'm glad that you've announced that this will be a series of hearings, so we'll have a chance to look at it in detail.

The CHAIRMAN. Senator Sununu has a thoughtful piece in the *Wall Street Journal* this morning, which I urge all of my colleagues to review, and I—without objection, it will be entered in the record at this time.

[The article referred to follows:]

Wall Street Journal—February 24, 2004

VOICE OVER INTERNET PROTOCOL (VOIP) OF THE PEOPLE

By John Sununu

Should local governments have an inherent right to regulate and tax any communication between two individuals that utilizes a human voice? Should we discourage the use of broadband networks for fast, reliable and cheap communications simply because a new technology doesn't fit neatly into an existing regulatory slot? Should regulations discriminate between two data files simply because one carries instant messaging and the other someone's voice?

Until quite recently, these questions were relegated to circles of academics, techies or regulation junkies (yes, they do exist) speculating about how the Internet might affect entrenched telephony providers. Today, these issues have become practical, substantive questions that will make or break the implementation of Voice Over Internet Protocol (VoIP)—a new technology that utilizes the packet-based method of Internet communications and, in some instances, the architecture of the Internet to bring new voice applications to consumers. VoIP generates significant network efficiencies, reduces capital expenditures and produces considerable cost savings. Moreover, the innovative features and robust functions underscore that VoIP is not just a fancy phone network and must not be treated as such.

The debate has just begun, but the wagons are already being circled by those determined to protect a regulatory scheme based on the copper wire telephone system invented by Alexander Graham Bell. Our goal should be to allow this new tech-

nology to evolve, which will dramatically reduce the cost of voice communication to a level commensurate with that of any other bit of data transmitted over the Internet. To ensure that a misguided approach does not develop and to provide certainty to the marketplace, I will introduce VoIP legislation in the coming weeks to establish several key protections for this new technology.

—First, my legislation will treat VoIP as an information service. The broadband cable, DSL or high-speed line you are using does not care whether data packaged using the Internet Protocol is a spread sheet, e-mail, instant message or voice traffic. Recognizing this simple fact helps establish a level playing field for all forms of data in order to fit a regulatory system designed five, 10, 20, 30, 50 or 100 years ago. Conversely, there exists no sound basis for discriminating among different types of data. Would anyone argue that taxes for e-mail should be different from those imposed for transmitting financial spreadsheets or power point presentations? The same principle should extend to an Internet voice call as well.

—Second, we should establish Federal jurisdiction over VoIP applications. Internet packet switching routes data across a global network requiring a national framework and treatment. Allowing thousands of state and local regulators to wrap their tentacles around VoIP will place costly and unnecessary burdens on a growing interstate communications network. What would happen to e-mail or instant messaging if states imposed regulations on those applications? The role of the Federal government should be to establish a clear and efficient regulatory structure that will not discourage investment in the development of these new systems.

—Third, my bill will protect this data service from taxation. The Internet-access tax-moratorium debate has highlighted the need to prevent tax commissioners from imposing oppressive tax treatment for telecommunication on VoIP. Those who believe that e-mail should be taxed will disagree on principle. All others place themselves in the awkward position of trying to differentiate different sets of ones and zeros in binary code in order to protect tax collections or corporate revenues. Both attempts are signs of short-sightedness—one on the part of big government, the other on the part of big business.

Since our Nation's founding, legislators have justified regulations on the basis that they serve the public interest. A regulatory framework may be advanced to improve public safety, inform consumers or protect public health. In fact, public-interest concerns such as enhanced 911, disability access, and interaction with law enforcement will be among those considered by comprehensive legislation. But extending these obligations must be done with an understanding of the unique architecture and technical aspects of this new application. Unfortunately, within the developing VoIP debate, this governing principle of public interest has been turned on its head. The defenders of the existing regulatory scheme seek to protect the existing tax, distribution of revenues, or other vested interests, at the expense of sound public policy.

If there is one thing we have learned about the information economy, it is that innovation circumvents a flawed regulatory regime. Let's get this one right from the start.

(Mr. Sununu is a Republican Senator for New Hampshire.)

The CHAIRMAN. Senator Sununu?

**STATEMENT OF HON. JOHN E. SUNUNU,
U.S. SENATOR FROM NEW HAMPSHIRE**

Senator SUNUNU. Thank you, Mr. Chairman, for enabling me to avoid the immodest suggestion that my own op-ed piece be included in the record.

[Laughter.]

The CHAIRMAN. That was my intent.

[Laughter.]

Senator SUNUNU. This is an important hearing, obviously. This is a new technology, and one that, I think, many of us Members of the Senate—House Members probably would agree—don't necessarily understand especially well, just the nature of the technology and the complexity of the systems that we're dealing with.

I would take a few moments to make a few points about the uniqueness of this discussion, however, and that is, first, that be-

cause of the nature of the Internet and the IP protocol that's being used to transmit these voice conversations, or voice traffic, we're dealing with national and, in fact, global networks. And I think that's important to reflect on constantly, because the nature of those national and global networks call out for a national regulatory framework, and I think that's going to be a part and parcel of a lot of the discussion that takes place.

Second is the fact that we need to act in a timely way. We don't want to rush any legislation, necessarily. We don't want to do anything that would stifle innovation and investment in this area. But, at the same time, markets desire and benefit from regulatory certainty and clarity. And, at the same time, our own FCC and even state regulators benefit from some guidance at the Federal level. And I think that's why it's important that we have this hearing, and why we move forward with legislation, as appropriate, in a very timely way.

Third is to underscore that we are dealing with, as was pointed out by Senator Wyden, an application that rides on existing pipes and pathways and wires, but it is an application, and not a telecommunications service or system. And, in that regard, I would argue that it is an information service, because, at the end of the day, what a VoIP transmission is, is a data file; these are bits and bytes of data that are packetized and sent using the IP protocol. And if we try to regulate or legislate, discriminating on the type of data that is being sent over a broadband network or a cable network or a fiberoptic network or a wireless network, then I think we are headed down the wrong path.

And, in this regard, some of the recent rulings of the FCC have directed us—or sent us in the right direction. We don't want a regulator to be in the position of looking at data and trying to determine, Is this an e-mail message? Is this an instant message? Is this VoIP traffic? Is this a data base? Are these photographs?—and then trying to regulate or tax, based on what kind of data is being sent over an information network. And I think that's a very important distinction to make.

We can, and we will, make sure we respond to the public needs that Chairman McCain made reference to—the enhanced 911, law enforcement issues, universal service. We, on this Committee, and others, know that universal service is something that is destined to have a legislative package prepared for—all of those questions will be addressed and will need to be addressed. But we cannot make the mistake of just trying to fit, or slot, VoIP into an existing regulatory framework because we're trying to protect incumbents.

And, ultimately, I think this debate is a question about who will benefit from the new technology. Who will benefit? Is it consumers that we want to benefit from new technologies, new ideas, lower-cost transmission; and in particular, I will underscore, consumers in rural areas, who haven't yet benefited, in many cases, from the rollout of broadband networks, and this may be an application that will accelerate that rollout if we don't kill it through over-regulation; or will it be incumbents that benefit, incumbent regulatory structures, incumbent tax structures, incumbent businesses, incumbent revenue streams that we decide benefit from the legislation that we pass? We've got to decide who we want to make sure

is protected by the emergence of this new technology, and I think that is a significant challenge.

I am drafting legislation, as many of my colleagues are already aware, that address many of these questions. I have spoken to many of my colleagues on this Committee. I will speak to all of my colleagues on the Commerce Committee before introducing legislation. But I look forward to the information presented today, and, again, I appreciate the hearing, Mr. Chairman.

Thank you.

The CHAIRMAN. Senator Cantwell?

**STATEMENT OF HON. MARIA CANTWELL,
U.S. SENATOR FROM WASHINGTON**

Senator CANTWELL. Thank you, Mr. Chairman. And thanks for holding this important hearing on IP telephony.

IP telephony is an important innovation in which we can give consumers something they deserve, driving down the cost of actual phone service.

Now, I know many people here today believe that this hearing—I guess we are in Washington, D.C.—is about regulation. Well, the Washington I come from is about innovation. And this is about innovation of a technology in which we need to preserve its nascent stage so that more competition can happen in the future.

As one of my technology friends said, “Old technologies, like dinosaurs, deserve to die in the tar.” I think that’s what we’re going to see eventually with circuit-switch technology.

That is not to say that the players that are currently playing, like RBOCs and others, can’t and won’t adopt this new packet-delivery technology because they will. They are already delivering some of the phone system, right now, on a backhaul over the Internet, and saving people dollars.

So the real question I think we have before the Committee, Mr. Chairman, is whether this Committee is going to do its job in protecting consumers with the ability to have the evolution of technology and competition drive down costs so that the public can benefit from new technology.

Before the Internet was really an open system, and we had BBN, we didn’t really have much innovation. Once it became an open standard, we saw a huge growth in the innovation of new applications.

Well, that’s where we are today. Are we going to try to make this a proprietary network, or take the old tariffs and barriers to the industry and propose them on a new technology and, thereby, stifle innovation, and jam consumers with continued higher prices in telephone costs?

The issue today is really that this technology, while good, is still developing. The compression—my hat’s off to those who have developed the compression technology, but it is still not as stable as it will be in future generations. The fact that this technology needs to develop, get to the level of a guaranteed service, needs to have the competition of many forces.

Second, a lot of discussion has been made about 911 and law enforcement, and I think there’s plenty of time for that to transpire and those solutions to be made. But I hardly think—in fact, I hope

that we might even be able to get the FBI and the Attorney General on record—my guess is, with Magic Lantern and Carnivore, the FBI has probably already all the tools it needs to sniff packets, and is probably doing so at this very moment. So I don't think that we need to use that as a hangup for why we should not move forward on having no regulation of this particular industry.

My hat is off to the Chairman of the FCC for his, as we say in technology, "getting it." He has tried a very slow approach to this so that innovation can mature and so that consumers can be protected.

There are important issues left to be discussed, and I'm sure we will, but this industry does not currently have interoperability. And while there is a standard session-initiated protocol, just like TCPIP for the Internet, people build on that, and build on it with proprietary systems. So today, Vonage can't call Packet8, and vice versa. So are we going to make sure that we protect the development of this system so that a proprietary network by anybody isn't developed, and that a proprietary system that is closed basically curtails the competition that we'd like to see?

Second, are we going to have open access? For those in the broadband business who currently have an ability to bundle this service today, are they going to provide open access to the other carriers, who might be able to provide lower costs? I think that's something very important the FCC should look at.

How do we get to international success? I'm not advocating that we play a role in developing an interoperability standard, but that we allow the industry to develop and create that standard and move forward.

The bottom line is, we are just at the very, very beginning stages of this technology. Someday I'll be sitting at a Starbucks that has a WiFi network, talking to somebody on a handheld device, on a video-conference, and also downloading my e-mail at the same time, off of one device. That hardly looks like the same competition to the current POTS, plain-old telephone-line system, that we have today.

So let's do our job, as Members of this Committee, and keep in mind that innovation and technology drive down costs to consumers, and that that's what we are here to protect, and not jump to the bandwagon of regulating this industry.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Burns?

**STATEMENT OF HON. CONRAD BURNS,
U.S. SENATOR FROM MONTANA**

Senator BURNS. Amen.

[Laughter.]

The CHAIRMAN. Senator Lott?

Senator BURNS. I want to—I'd ask unanimous consent that I'd put my statement in, but I want to associate myself with a lot of things that's been said around this table.

You know, when we start dealing with these policy things that we try to maintain neutrality, and technologies that are used, and interoperability, and all this thing—interoperability comes with

time. And whenever they take a look at the market, the market forces interoperability more than anything else.

I've got another hearing, on Mad Cow Disease, and I was going to give mad cow to your cash cow over there.

[Laughter.]

Senator BURNS. And they said, "Were they sure she was a mad cow when she went to slaughter in the state of Washington?" And I said, "Yes, if I was going to slaughter, I'd be a little cranky, too."

[Laughter.]

Senator BURNS. But I think there are a couple of areas where we'd better do our homework here, as the Senator from Washington says. I think it'll boil down to definitions, how we define, and what we define, "services" and also "technologies." That'll be an area of great challenge to us and to the Commission. E-911 will be an issue that we will have to take a look at, because, with over 200 million calls a year on E-911, we have to do something in that area, and how we do it and how we approach it. And the third one is, of course, the universal fund—Universal Service Fund, and how we deal with that.

So, Mr. Chairman, thank you for this hearing, and I appreciate your having this hearing, and I look forward to reading the testimony. And I've just got to go to this other—we've got almost as many cattle as we've got telephones, and so—in my state, so I've got that to deal with. But thank you for this hearing.

But those are the areas that we will have to—but I think the most important area, and where we really get in trouble when making policy and dealing with this issue is definitions, how we define, how we lay it out, and what—and where we want to go.

But the Senator from Washington had it. She's right on target. We've seen this great industry blossom because we didn't know how to regulate it. Government still hasn't figured it out. And maybe we could put that off for another 5 or 6 years, and then we'll debate it again.

And the Chairman is also correct and says there are areas of the 1996 Act that should be looked at, and—but when we do that, then we're back in the definition business again.

And I want to thank the Chairman of the FCC for coming today, and my opportunity just to say this, and I would submit my statement.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Lott?

**STATEMENT OF HON. TRENT LOTT,
U.S. SENATOR FROM MISSISSIPPI**

Senator LOTT. Thank you, Mr. Chairman.

I ask consent that my statement be made a part of the record.

The CHAIRMAN. Without objection.

[The prepared statement of Senator Lott follows:]

PREPARED STATEMENT OF HON. TRENT LOTT, U.S. SENATOR FROM MISSISSIPPI

Mr. Chairman, thank you for holding this important hearing today on the rapidly emerging issue of "Voice over Internet Protocol." The revolutionary changes that have been brought about in our country by the Internet are continuing with its

being harnessed for the transport of voice calls. I have always believed that Americans benefit when there is competition and innovation, and new "Voice over Internet Protocol" services are serving as a catalyst for the regeneration of the telecom sector in the United States. Transporting phone calls over the Internet has the potential of offering low cost telecommunications options for everyone, and government should be careful and prudent in addressing how best to incorporate these new services into our Nation's current telecom system.

I am pleased that this Committee is beginning to look closely at the tremendous advantages of "Voice over Internet Protocol", particularly with an eye towards whether new legislation is necessary to provide a framework within which these new voice services will be offered in the future. I was encouraged to learn that the FCC has begun a rule-making proceeding on "Voice over Internet Protocol" in an effort to gather as much information as possible in a public record. However, it is important for this committee of jurisdiction to provide oversight for this regulatory proceeding, with careful consideration being given towards any statutory changes which may be necessary to keep Federal law current with technological advancements.

As "Voice over Internet Protocol" becomes more widely used, we must be vigilant to insure that important telecom policy goals continue to be met. Along with the offering of affordable and widely available options for making voice calls transported over the Internet comes a host of issues that must be addressed. The decisions that are made as "Voice over Internet Protocol" is deployed are critical to the future of telecommunications in this country, and to the economy as a whole.

The roles that the states and the Federal government will play in the oversight and regulation of these new services must be defined to provide certainty for the companies offering such services and for the consumers using them. As existing and new carriers offer "Voice over Internet Protocol" to the public, they must know which entities have jurisdiction over their actions, and whether these new services are classified as telecommunications services or as information services. Additionally, the law enforcement community and the providers of "Voice over Internet Protocol" must know the rules for conducting authorized surveillance and monitoring when a suspect is communicating via calls traveling over the Internet.

Of key importance is the potential impact on the Universal Service Fund as "Voice over Internet Protocol" becomes a more prevalent option for consumers. Contribution obligations for existing and new carriers which provide these new services must be clear to make certain that telecom services remain available to all Americans—especially people living in rural areas such as those in many parts of Mississippi. Also, as calls move from traditional wireline carriage to the Internet, enhanced 911 deployment must keep up so that the origin of emergency calls traveling over the Internet can be determined. It is important that disabled Americans also be able to utilize new Voice Over Internet Protocol services so that our country's telecom network remains open to all.

I am looking forward to hearing the testimony of the witnesses today, and particularly appreciate FCC Chairman Michael Powell being here to share his thoughts on this exciting new development in telecom. I know that this hearing will be helpful as the committee considers the current and potential impact of "Voice over Internet Protocol." I am hopeful that we can maximize the benefits of this breakthrough in the telecom marketplace, while minimizing any negative repercussions that may arise during its growth.

Senator LOTT. I want to thank you for having this hearing, and thank our witnesses for being here. I particularly want to thank Chairman Powell for stepping up and taking cognizance of this issue and taking a look at where we are and where we're going.

You know, talking about it as we were coming to this meeting today, and what has happened since we did the last Telecommunications Act of 1996 has been breathtaking. And the opportunities for technological advancement in the future are just staggering, and I think we've got to think about it and pay attention to it, not necessarily take control over it or regulate it, but at least be conscious of what impact it's going to have and what effect it will have on various sectors of this important part of our economy.

So, with that, I'll yield the floor.

The CHAIRMAN. Senator Lautenberg?

**STATEMENT OF HON. FRANK R. LAUTENBERG,
U.S. SENATOR FROM NEW JERSEY**

Senator LAUTENBERG. Mr. Chairman, I thank you very much. I recognize that we've arrived late, and I would ask consent that my full statement be included in the record—

The CHAIRMAN. Without objection.

Senator LAUTENBERG.—as if read.

I do want to say that the—in terms of a base of telecommunications, communications generally, New Jersey really stands out. We've got a lot of talent and a lot of interests, but also a huge infrastructure related to telecommunications services, telephone services, over-the-Internet, and otherwise.

And so, Mr. Chairman, as we examine this, it must be kept in mind that there are issues, peripheral issues, that don't directly address the question of the technology, but, rather, income to the states, how do we deal with the Internet access fees, those kinds of things.

And, Mr. Chairman, as usual, I see that you and the Committee have structured a fairly thorough review. I commend you for it. And since it is so complicated, I'll end my comments there and watch with interest.

Thank you very much.

[The prepared statement of Senator Lautenberg follows:]

PREPARED STATEMENT OF HON. FRANK R. LAUTENBERG,
U.S. SENATOR FROM NEW JERSEY

Mr. Chairman:

Thank you for holding this important hearing on Internet telephony, which is commonly referred to as "Voice over Internet Protocol." This hearing is indeed timely: in just the past few months, three Baby Bell companies (Verizon, SBC, and Quest); three of the largest long distance telephone companies (AT&T, Sprint, and MCI); and three cable companies (Comcast, Time Warner, and Cablevision) have all announced their entry into the VoIP market.

It is clear that, due to this new technology, there will be direct benefits to consumers in the form of competitive prices and expanded and personalized service.

Not surprisingly, consumers have responded favorably to VoIP services. Earlier this month, for example, Vonage, a provider of phone service over high-speed Internet lines from its offices in Edison, New Jersey, signed up its 100,000th customer. That's double the size of its subscriber base less than five months ago. That's strong consumer response.

I believe that our discussion today is as much about *broadband deployment* as it is about voice communications over the Internet. After all, it is only the continued deployment of broadband that will permit consumers in residential markets to consider VoIP as an alternative platform for telephone communications.

I'm interested in knowing whether this Nation has a broadband deployment plan. And if we do, what is it?

According to a report released last week by the Congressional Budget Office (CBO), the United States has the largest number of subscribers worldwide to high-speed and dial-up Internet access services.

The report also found that by most measures, "U.S. businesses and consumers make more and better use of the Internet than do their counterparts in other nations." But according to CBO, there are only 6.9 *broadband* subscribers for every 100 Americans with Internet access, a rate that is only the *sixth-highest* in the world.

I know that broadband deployment is not the subject of this hearing, *per se*, but I believe we need to keep that in mind if we truly want all of the benefits of Internet access to be widely available and affordable.

Concerning VoIP, today I'm interested in hearing about the industry's commitment to fulfilling the communications needs of the public safety, law enforcement,

and disabled communities, and whether the Federal Communications Commission should require Voice over IP providers to meet these needs.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, sir.
Senator Dorgan?

**STATEMENT OF HON. BYRON L. DORGAN,
U.S. SENATOR FROM NORTH DAKOTA**

Senator DORGAN. Mr. Chairman, I notice my colleague, Senator Burns, left for the Appropriations Committee, and that's because there's a hearing on Mad Cow Disease, and so I'm going to be leaving this hearing to go to a hearing on Mad Cow Disease. I regret that I can't be in both places. But coming from North Dakota, I would be well-advised to be at the Appropriations hearing at the moment.

But VoIP is critically important. The Chairman of the Commission is here today, and I know that he's made some speeches about this issue. This is a really interesting and important issue. I see it especially important for people in rural America. You know, when we learned to talk by electricity, as they described it 120-some years ago, things haven't changed very much over all of these years. But VoIP is the cliff that's going to cause dramatic changes. And I'm very concerned about equality for rural consumers, especially in smaller states, where we may not have the buildout of technology quite the way you have it in some of the larger cities. So the issues of the universal service funds and so many other issues that relate to this are critically important to me and to my state of North Dakota.

Mr. Chairman, I'm very pleased that you have held this hearing. I look forward to a dialogue with the Commission and others, and my colleagues on the Committee, and I regret, again, that I'll have to go to the Appropriations Committee this morning.

The CHAIRMAN. Thank you, Senator Dorgan.

Senator Alexander, would you please come forward? And, Chairman Powell, would you also take a seat at the table, as well?

Welcome, Senator Alexander, and please proceed.

**STATEMENT OF HON. LAMAR ALEXANDER,
U.S. SENATOR FROM TENNESSEE**

Senator ALEXANDER. Mr. Chairman, Members of the Committee, Chairman Powell, thank you for the opportunity to join your hearing as you take a first look at how we may begin to make most of our telephone calls over the Internet.

I imagine that Chairman Powell will tell you what he told me a few weeks ago, that suddenly more and more Americans are making their phone calls over the Internet, and it's coming down the track like a speeding freight train. I'm here today to help make sure that our state and local governments aren't tied to the tracks ahead of the train. I'm here to urge that in the excitement about the promise of this new technology, we don't forget about one of the most important principles that unite us as Americans, and that is the principle of federalism.

Historically, state and local governments have shared the responsibility for regulating the telecommunications industry. The Chair-

man has indicated, many of you said, that regulation of telephone calls over the Internet, or other information services, might have minimal regulation. I have no quarrel with that conclusion. But there is another area that state and local and Federal governments have shared, in terms of responsibility affecting telecommunications, and that is taxation. The Federal 3 percent tax on telephone service collected nearly \$6 billion last year. State and local governments collected more than \$20 billion last year on telephone services and service providers. Six billion is barely a drop in the Federal bucket. Twenty billion is a lot in state and local buckets.

In Tennessee, for example, we collected \$361 million on telephone service and providers. That's about 5 percent of the state-collected tax dollars in Tennessee, Texas and Florida each collected about one billion on telephone services. Senator Feinstein said, on the Senate floor, that telephone tax collections were 5 to 15 percent of the budgets of many California cities and towns.

Congress has respected the importance of these telephone revenues to the stability of state and local governments. In 1996, the Telecommunications Act specifically said nothing in the act should modify, impair, supercede any state law pertaining to taxation.

This Committee and the FCC are just beginning to consider how to approach issues of regulation and taxation as traditional telephone services migrate to the Internet. I salute you for that. But it's not too early to wave the red flag of federalism.

Earlier this year, the House passed a bill that could put at risk the entire \$20 billion state and local governments collect annually on telephone services and providers. The House did this in the name of making permanent something else, the Federal moratorium on state and local Internet access taxes that began in 1998. The House bill sounds innocent enough, but if the FCC should decide, as it has indicated it might, to designate VoIP as an information service, then the language of the moratorium legislation bill would likely ban states from collecting taxes on telephone calls made over the Internet.

The current Senate version of the bill, S. 150, is something less of a threat. But according to the Congressional Budget Office, it still could cost state and local governments up to \$10 billion a year in annual taxes collected on the sale of telephone services. Those are taxes state and local governments are collecting today.

There's no justification whatever, Mr. Chairman, for Congress deciding to give telecommunications companies such a bonanza, and then turn around and send the bill to Governors and to mayors. It's the worst kind of unfunded Federal mandate, a cost on state and local governments imposed by Congress without reimbursing.

The Republican majority came to power in 1995 promising to end such unfunded mandates. Banning a tax is just as much an unfunded mandate as requiring a service, unless you reimburse.

The CHAIRMAN. Would you repeat that, please?

Senator ALEXANDER. Banning a tax is just as much an unfunded mandate—

The CHAIRMAN. Eliminating a tax?

Senator ALEXANDER. Eliminating a tax now being collected is just as much an unfunded mandate as requiring a service without

paying the bill. That's what common sense suggests. That's what the 1995 unfunded mandate law says, explicitly. And that's what the Congressional Budget Office reported to Congress was its reading of the law, which was passed by this Congress, and for which 62 Senators, who still are here, voted.

If Congress really wants to pick and choose among American business enterprises, and decided that high speed Internet access business is one we all want to subsidize, then Congress ought to pay the bill, and not send it to the states. I'm not at all convinced Congress should adopt such an industrial policy. More than 24 million Americans are already paying for high speed Internet access, more than in any other country. According to the Department of Commerce, high speed Internet access is growing today more rapidly than color TV, cell phones, or VCRs at similar stages in their development. It's no surprise, therefore, that the Congressional Budget Office reported to us last year that a government subsidy for high speed Internet access is unnecessary. The free market will do just fine, I believe.

But if Congress should insist on a subsidy for high speed Internet access, there's a much less expensive and more efficient way to do it than by giving a \$20 billion-a-year tax break to the telecommunications industry. The model comes from Texas when George W. Bush was Governor. Governor Bush signed into legislation a law that gave every Texas citizen a sales tax exemption for the first \$25 per month that that citizen paid for high speed Internet access.

If there's to be a national subsidy for high speed Internet access, I propose we adopt the George W. Bush Texas plan. Let every state and local government give a \$25 exemption from sales taxes to consumers who buy high speed Internet access. If there were, for example, 100 million subscribers, the national bill would be about \$2 billion. In order to avoid unfunded Federal mandates, Congress should pay that bill and reimburse states and cities each year for their costs. To help pay the \$2 billion drain on the Federal treasury, Congress should raise the Federal excise tax on telephones from 3 percent to 4 percent.

Chairman Powell stated, at the National Press Club, that the goal of the FCC should be to do no harm to the industry—I agree—and suggests that the importance of the principle of federalism in American life, that—given the importance of the principle of federalism, that the Chairman's goal should be, at the same time, that we do no harm to state and local governments.

That's why Senator Carper and I, along with nine Senators of both parties, have introduced legislation that would extend, for 2 years, the current moratorium on state and local taxation of Internet access so that Congress may consider its finding in these hearings, may consider deliberations of the FCC, and make the best possible judgment about what sort of regulation—

The CHAIRMAN. Senator Alexander, we usually try to limit, to 5 minutes or so, statements, so if you could summarize, I would appreciate it—

Senator ALEXANDER. I'm sorry—

The CHAIRMAN.—because we have two—

Senator ALEXANDER.—Mr. Chairman.

The CHAIRMAN.—two panels waiting to testify.

Senator ALEXANDER. I will summarize at this point about what's—

The bottom line, Mr. Chairman, is, I hope that, as the Commission—as the Committee considers making telephone calls over the Internet, that it also considers the principle of federalism and avoids the principle of picking and choosing winners in our economic marketplace.

Thank you very much for your time.

[The prepared statement of Senator Alexander follows:]

PREPARED STATEMENT OF HON. LAMAR ALEXANDER, U.S. SENATOR FROM TENNESSEE

Mr. Chairman, members of the Committee, I would like to thank you for the opportunity to testify here today as you take a first look at “voice over Internet protocol” (VoIP)—a technology that could lead, in a few short years, to all our phone calls being made over the Internet. Chairman Powell will undoubtedly repeat what he told me in my office just a few weeks ago: telephone service on the Internet is coming down the track like a speeding freight train. Companies like SBC—one of the country's largest phone companies—have announced that they plan to have VoIP available in most metropolitan areas as soon as the end of this year.

I am here today, however, to make sure that our state and local governments aren't tied to the tracks ahead of this train. I want to take this opportunity to talk about one of the most important principles of government that unites us as Americans—federalism. We're going to be talking about federalism here today as we discuss the regulation of this new technology. Historically, state and local governments have shared the responsibility in the regulation of the telephone industry. This shared responsibility has given states a major say in how service is provided in their states, the provision of emergency services, and the provision of services to low income and rural customers.

As the FCC considers how this industry is to be regulated—and Chairman Powell has already indicated that he supports minimal regulation of VoIP technologies—we must recognize that state and local governments have interests that must be preserved. One other area has become my focus in recent months: the taxation of telephone services. According to the Congressional Budget Office, states are already collecting more than \$20 billion in taxes on telephone service and service providers annually. In Tennessee, the \$361 million collected is more than 5 percent of its general revenues. In Texas, more than \$1.2 billion is collected. In light of the significance of these revenues to state and local government, as Congress and the FCC begin to consider how to handle these issues, I think that it is most important to raise a red flag on federalism at this time.

In dealing with the growth and regulation of the telecommunications industry Congress has generally respected the tradition of strong state and local governments. But, the House of Representatives has already passed a bill that would put at risk this \$20 billion in revenues. In extending the current moratorium on the taxation of Internet access, this House bill sounds innocent enough, but, if the FCC should decide, as it has indicated it might do, to designate VoIP as an information service, then the language of the bill could very likely ban states from collecting these taxes.

The Senate version of this bill, S. 150, though less of a threat, still risks more than \$10 billion in annual taxes collected on the sale of telephone service according to a Congressional Budget Office letter that I will include today with my testimony. This letter makes it clear what the text of the Budget Act as amended in 1995 and common sense tells us: banning a tax without paying for it is just as much of an unfunded mandate as requiring a service without paying for it. I certainly agree that high-speed Internet access is important to growth in our economy and should be encouraged. But, I would point out that the Department of Commerce reports that there are already more than 24 million high-speed Internet users in the United States today.

The Department of Commerce also reports that high-speed Internet has been adopted by consumers at a faster rate in the last five years than cell phones, CD players, VCRs, and even color televisions were adopted at the same point in their first five years of deployment. The Federal Government didn't feel the need to exempt from taxation such important industries as telephones, railroads, and automobiles and they did just fine. Why then is it so important to exempt Internet ac-

cess from taxation when the numbers show that it's doing just fine on its own? But even if it is in the interest of the Federal Government to do so, I don't see why we should send the bill to the states.

If the Federal Government wants to do it, then the Federal Government should pay for it and consider former FCC Chairman Reed Hundt's proposal for a subsidy of \$50 billion to bring high-speed Internet to 100 million homes. Chairman Powell stated on January 14, 2004, at the National Press Club that the goal of the FCC in regulating phone calls over the Internet should be to "do no harm" to the industry. I agree with that, and I think that principle should be expanded to include an effort to do no harm to the state and local governments that have come to rely on these tax revenues. I believe that the bill I have proposed with Senator Carper and nine other senators who have served in state and local government positions embodies this idea.

It is a temporary measure that makes sure we don't take a permanent action that has drastic long-term consequences, and it protects states that are already collecting Internet access taxes to prevent them from seeing an immediate loss in revenues. These are the principles we should be seeking to apply as the discussion of this technology continues, and I hope that the Committee will keep these points in mind as it listens to the testimony here today.

The CHAIRMAN. I thank you, Senator Alexander. And I thank you for your involvement in this issue in Internet taxation. I think you've made great contribution to the debate and the education of Members on the issue.

Senator Alexander, I believe that Senator Wyden would like to ask you a question, if that's agreeable to you.

Senator ALEXANDER. Of course.

The CHAIRMAN. You don't have to. I know you have a busy schedule.

Senator ALEXANDER. No, I'm happy to talk as long as you'd like. [Laughter.]

Senator WYDEN. Thank you, Mr. Chairman. I thank my colleague. You've been a great addition to the Senate.

Phone calls over the Internet, as the Senator knows, travel as packets of light through hundreds and literally thousands of tax and regulatory jurisdictions. I'd like to know if the Senator believes that state and local governmental authorities should have the authority to tax every VoIP call. There are 7,600 taxing jurisdictions, local and state. It seems to me that's what the Senator is saying. And I would just like you to state, for the record, whether you think state and local taxing authorities should have the jurisdiction to tax, if they choose to, every VoIP call.

Senator ALEXANDER. I think state and local jurisdictions should have the authority, as they do today, of taxing transactions in their states. Whether they choose to do that is up to the Governor and the mayor and the locally elected officials. They don't choose to do that with telephones. They send a monthly bill and tax the service, and we all pay a little tax on that. I don't see any difference, really, in that.

Senator WYDEN. Well, what the Senator is calling for is a reversal of the Quill decision, and I think it's important that that ought to be understood—and, to your credit, you've always been honest about that—the Quill decision says you can't tax without physical presence. And what you've just said is that every taxing jurisdiction in America ought to be able to tax without physical presence.

VoIP calls are going to be made, as we've talked about today, through packets of light. So I just want the Senate and the country to understand what's really at issue here is, your side wants to

throw the Quill decision in the trash can. I think that would be a great mistake. A huge majority of the Senate has opposed it—I hope we will continue that as we go forward. And my sense is, is that what this position is really going to lead to is taxing, you know, virtually everything—e-mail and Blackberries and the like—under VoIP. I think that would be unfortunate.

Fortunately, we are going to have a thorough debate, Mr. Chairman, in the Committee. But the Senator has been candid here, and he'd give state and local authorities taxing and regulatory jurisdiction nexus, as it's called, over every VoIP call and put them in a position to be taxed, and I think that would be a mistake.

Can I ask one other question?

The CHAIRMAN. First, I'd like for Senator Alexander to be able to respond to that—

Senator WYDEN. Of course.

The CHAIRMAN.—if he would like.

Senator ALEXANDER. Thank you, Mr. Chairman.

I wouldn't have characterized my answer that way, Senator Wyden. My purpose here is to say that if the Congress and the Federal Communications, working together, decide to have minimal regulation of VoIP and information services as they're delivered over the Internet, and that somehow that set of decisions affects the \$20 billion a year that state and local governments rely on, that the Congress take that into account in its decisionmaking. I mean, last year, we bailed out states with a \$20 billion gift. We won't be doing that this year.

I'm not sure I have the solution. I've suggested one today, which is a \$25—to adopt the George W. Bush Texas plan and give everybody a \$25 exemption, let Congress pay that bill, then we wouldn't have any of the issues that you just talked about. People are still going to pick up the telephone and make a call.

Senator WYDEN. Well, you have said that all these jurisdictions ought to have authority over a VoIP call. That's what you said in response to my first question.

And I guess the only other one that I want to ask, are you troubled at all that this will chill investment in broadband? VoIP and broadband are really two sides of the same coin, and it seems to me, again, that you would allow, with all these taxing jurisdictions, something that would really harm broadband development, a big jobs creator, and particularly one in rural states, like yours and mine. Are you troubled at all by that?

Senator ALEXANDER. I am not, because there are 24 million high speed Internet access providers in America, more than in any other country. The Department of Commerce says that's growing more rapidly than VCRs, color TVs.

But if I were troubled by it and wanted to give the high speed Internet access industry a big subsidy, as Mr. Hunt, I believe, did when he was at the FCC, I'd be straightforward about it and recommend that we spend \$10 billion, \$15 billion, \$20 billion, and just subsidize the industry, rather than subsidizing them by sending the bill to state and local governments, who are already struggling. That's my concern.

Senator WYDEN. OK.

Senator ALEXANDER. And I think if we have 2 years to think about it, we might come to a better conclusion.

The CHAIRMAN. We have to move along.

Senator Allen, did you want to ask one question? But we really need to move along. We need to hear from Chairman Powell, and then we have another panel.

Please go ahead.

Senator ALLEN. Thank you, Mr. Chairman. Just for clarification of our bill that you're a key lead on, along, obviously, with Senator Wyden and Senator Sununu.

S. 150 has to do with Internet access taxes. The opponents, who are in favor of allowing access taxes on the Internet, try to get—have maybe misunderstood, intentionally or unintentionally, in some of their projections of the fiscal impact, that this measure somehow affects voice over IP. Our measure clearly was never intended to. The manager's amendment made clear that the issue of voice over IP would not be adjudicated or disposed of in our measure. That's what this hearing is about, voice over IP, and I'm glad the Chairman of the FCC is here, and, indeed, Senator Sununu's initiative.

To make it abundantly clear for folks, so that we don't have this continued confusion, I will be offering an amendment, Mr. Chairman, to our measure on Internet access taxes that makes it very clear, plain English, that voice over IP is not affected one way or the other. That can be adjudicated elsewhere.

We were trying, Senator Wyden and myself, to make it a clear bill, don't get bogged down with all the things—the out-of-state collection of sales and use taxes, and compelling remote retailers to collect and remit sales taxes to 7600 different jurisdictions. That's not part of this measure, either.

Voice over Internet protocol, in my view, is a great advancement. I think we ought to be happy with the enablement, and further people—more people wanting to use broadband. This Committee has heard dozens of proposals over the years to try to get broadband extended to small towns and rural areas because of its benefits, whether for telemedicine, for education, for commerce, and enabling people to compete anywhere in this country or all over the world.

So I'll look forward to hearing the Chairman of the FCC's testimony, but let's just make it clear, for Senator Alexander—he and I had a debate a few weeks ago at Heritage and made it clear that voice over IP is not a part of our measure. It'll be perfectly clear. The actual fiscal impact of this measure is maybe \$80 to \$120 million, at most.

And I would also point out that what we're having are not elected people taxing broadband DSL, but, in fact, they're unelected Commissioners and public utility commissions and all those, that are taxing the advancements in broadband. And what we ought to be about in this Committee is embracing the advances in technology, how that's improving people's lives, the competitiveness of businesses in our country. And the fact that there are so many Internet service providers is actually an example of less taxation, less regulation, allowing those in the creative private sector to provide consumers with more choices at the best prices.

So, Mr. Chairman, I look forward to hearing the Chairman's comments on voice over Internet protocol, but let's make it clear, and stipulate for the record, that voice over IP has nothing to do with Senate Bill 150, as amended, and will be amended even further, and we can even underline it if that will assuage those who are concerned, so that we can get accurate figures.

And I will also point out that insofar as an unfunded mandate—you know, in the Medicare bill that we passed on prescription drug benefits, in the midst of that was a prohibition on states putting on insurance premiums taxes on drug policies.

I would also point out that the Federal Government, year after year, has come up—where there is a case clearly of interstate and international commerce, such as airlines tickets, no taxes are allowed there. Food stamp purchases, Senator Bob Dole made sure there are no sales taxes put on that.

And I can tell that the Chairman wants to get on to the Chairman of the FCC, so we can carry on this debate, hopefully soon, on the floor of the U.S. Senate so we can protect people in this country from onerous access taxes to broadband services.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Alexander, your complete statement will be made part of the record. We thank you.

Senator ALEXANDER. Thank you, Mr. Chairman.

The CHAIRMAN. We look forward to the continuation of this spirited discussion on the floor of the Senate, because I think there's one thing that we are in agreement on, all of us, and that is, this issue needs to be resolved. It needs to be debated thoroughly and resolved, rather than having it hang out there. It's just too much uncertainty for all parties concerned.

I thank you, Senator Alexander.

Senator ALEXANDER. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Chairman Powell, welcome.

**STATEMENT OF HON. MICHAEL K. POWELL, CHAIRMAN,
FEDERAL COMMUNICATIONS COMMISSION**

Chairman POWELL. Thank you, sir.

Good morning, Mr. Chairman, distinguished Members of the Committee. It's always a pleasure to come before you today, particularly to discuss Internet voice services, what I have described as one of the most monumental moments in all of communication history.

For the last three and a half years as Chairman, we have had an engaged debate in this nation, a dialogue that we've called the "digital migration" taking place across the communications landscape. The digital migration is about empowering consumers and replacing yesterday's slow, limited, and generally monopolistic communication networks with high speed, dynamic, and competitive full-service digital networks.

Increasingly, these digital broadband networks, whether wired or wireless, are using the flexibility of Internet protocol to offer Americans a full suite of communications services, from voice to video to data. We continue to work hard to bring these broadband Internet networks to each and every American at affordable prices.

At the FCC, we have championed the deployment of multiple broadband networks in order to rid ourselves of the intractable last-mile problem that has plagued the policy for over a hundred years. We have pushed for greater deployment of DSL, cable modem, third- and fourth-generation wireless systems, WIFI, ultra-wideband, satellites, and even broadband over power lines, just to name a few of the new platforms and services already in commercial use. More broadband platforms mean more competition, they mean more innovation, they mean more tools to advance important goals, such as universal service.

The Commission is mindful, however, that networks are valuable only if consumers use them, use them to communicate, to entertain themselves, to work, and to learn. These uses are often referred to as “Internet applications.” Successful Internet applications are vital to our national broadband policy, because they create the demand, and, thus, grow the network. Just as e-mail and e-commerce were drivers of the narrow-band Internet, higher-bandwidth applications, like streaming video, music entertainment, home networking, and, yes, Internet voice, will be the killer apps for broadband.

As you know, the FCC has not generally moved to regulate these applications. In part, this is a result of our charge in Section 230 of the Communication Act, which states clearly that it is the policy of the United States to promote the continued development of the Internet and other interactive communications services, and to preserve the vibrant and competitive free-market forces for these services, and I quote, “unfettered by Federal/state regulation.”

And against this backdrop, in recent months one application has grabbed the headlines, Internet voice services. These applications have garnered a great deal of attention because they allow voice communication among users, much like traditional wired or wireless voice networks.

Internet application—voice applications come in many flavors. In some cases, like in *Pulver.com*, the communication is purely computer to computer over broadband infrastructure. In other cases, the calls use a traditional phone. But the important point is, when packetized, voice applications are virtually identical to any other Internet application, such as e-mail or instant messaging. Consequently, any would-be entrepreneur is just a website and a server away from offering services that mirror, sometimes mimic, the phone company. And suddenly every consumer with broadband access can choose among potentially hundreds of voice over Internet service providers.

This remarkable development in the growth of competition is made possible by tapping into the global and ubiquitous Internet to deliver tremendous innovation and opportunity for the American people. And voice applications are not alone. We are really just at the beginning. Everywhere, Internet applications are bringing new competition to old markets, and, in turn, ushering in this era of innovation, competition, lower prices, and higher quality services.

So whether we’re talking about Internet voice services or video and audio services, Internet news services, or Internet commerce, the broadband revolution is bringing tomorrow’s communication and commerce tools to more and more Americans today.

These new opportunities for consumers are also providing new opportunities for our Nation's economy. There is a need to rip and replace the Nation's infrastructure, and that is stimulating previously moribund capital spending. It is opening new paths to economic growth. It is increasing our Nation's productivity, and holds out the promise of new jobs as businesses and consumers increasingly unleash the power of broadband.

Restraining from regulating the economics of Internet applications has served us well. The creativity and innovation of the marketplace is breathtaking and dynamic, bursting at the seams with entrepreneurial spirit. And consumers, who we're charged to focus on, are enjoying more choices, better value, and more personalized products than any time in communication's history. There is little compelling evidence that I can find that economic regulation of the sort we are accustomed to for such vibrant services is warranted at this stage.

I do, however, believe that you do have to promote, preserve, and advance certain venerable social and security policies. I think there's a growing consensus about that. If we could agree to focus on just those things, I think this country would have moved in a dramatic direction. Paramount among them, of course, universal service, 911, law enforcement, and disability rights.

And I recognize that IP services ride atop a physical layer that in many parts of our country is still busy—expensive to build and maintain, but we're committed to ensuring that the entire nation has access to affordable communications services as they move to IP.

At the Commission, we've begun laying the foundation for a comprehensive, yet minimal, regulatory environment for Internet voice applications. At our February meeting, the Commission adopted an MPRM to look at the issues surrounding these applications. We're working hard with our colleagues elsewhere in Federal Government, state and local governments, to develop a sound framework, and we're focused on advancing those goals of public safety, universal service, and homeland security, and access to people with the disabilities.

In addressing these issues, for example, I have called for a series of solution summits that will focus on the very technical problems that these face. The first will be held March 18th to address E-911 capability.

Finally, we are keeping a watchful eye for anti-competitive conduct by owners of broadband networks, to ensure citizens have the right to tap the full potential of the Internet in a broadband world.

I want to thank you, Mr. Chairman, for calling this hearing. I look forward to working with you, Members of this Committee, our state colleagues and industry, and my fellow Commissioners, on some of the most challenging and exciting issues in our history. And I'll be happy to take your questions.

[The prepared statement of Chairman Powell follows:]

PREPARED STATEMENT OF HON. MICHAEL K. POWELL, CHAIRMAN,
FEDERAL COMMUNICATIONS COMMISSION

SUMMARY OF WRITTEN STATEMENT

Good morning, Mr. Chairman and distinguished members of the Committee. It is my pleasure to come before you today to discuss Internet voice services.

For the last three and a half years, I have engaged you and the Nation in a dialogue about the digital migration taking place across the communications landscape. The digital migration is about empowering consumers by replacing yesterday's slow, limited and generally monopolistic communications networks with multiple high-speed, dynamic and competitive full-service digital networks. Increasingly, these digital broadband networks, whether wired or wireless, are using the flexibility of Internet protocols to offer Americans a full suite of communications services—from voice to video to data.

We continue to work hard to bring these broadband Internet networks to each and every American at affordable prices. We have championed the deployment of multiple broadband networks in order to rid ourselves of the intractable "last mile" problem. We have pushed for greater deployment of DSL, cable modem, 3G wireless, WIFI, Ultra Wide Band, satellites and broadband over power lines, just to name a few new services already in commercial use. More broadband platforms mean more competition, more innovation and more tools to advance important goals such as universal service.

The Commission is mindful, however, that networks are valuable only if consumers use them to communicate, to entertain themselves, to work, and to learn. These uses are often referred to as Internet "applications." Successful Internet applications are vital to our national broadband policy because they create demand and thus grow the network. Just as e-mail and e-commerce were drivers of the narrowband Internet, higher bandwidth applications like streaming video and music entertainment, home networking and Internet voice will be the "killer apps" for broadband. As you know, the FCC has not generally moved to regulate these Internet applications. In part, this has been a result of our charge in section 230 of the Communications Act that it is the policy of the United States to promote the continued development of the Internet and other interactive computer services and to preserve the vibrant and competitive free market for these services "unfettered by Federal or State regulation."

Against this backdrop, in recent months, one application has grabbed headlines: Internet voice services. These applications have garnered a great deal of attention because they allow voice communication among users, much like traditional wired or wireless voice networks. Internet voice application comes in many flavors, in some cases—like *pulver.com*—the communication is computer to computer, in other cases the Internet user calls a traditional phone. When packetized, voice applications are virtually identical to any other Internet application, such as e-mail or instant messaging. Consequently, would-be entrepreneurs are just a website and a server away from offering services that mirror those of a "phone" company. And suddenly every consumer with broadband access can chose among potentially hundreds of voice over Internet service providers. This remarkable development in the growth of competition is made possible by tapping into the global and ubiquitous Internet to deliver tremendous innovation and opportunity for the American people.

Voice applications are not alone. Everywhere Internet applications are bringing new competition to old markets and, in turn, ushering in an era of innovation, competition, lower prices and high quality services. Whether we are talking about Internet voice services, or Internet video and audio services, Internet news services, or Internet commerce, the broadband revolution is bringing tomorrow's communication and commerce tools to more and more Americans everyday. These new opportunities for consumers are also providing new opportunities for our Nation's economy. The need to "rip and replace" the Nation's infrastructure is stimulating previously moribund capital spending, it is opening new paths to growth, increasing our Nation's productivity and holds out the promise for new jobs as business and consumers increasingly unleash the power of broadband.

Restraining from regulating the economics of Internet applications has served us well. The creativity and innovation of the marketplace has been breathtaking and dynamic, bursting at the seams with entrepreneurial spirit. Consumers are enjoying more choices, better value, and more personalized products. There is little compelling evidence that heavy economic regulation of these vibrant services is warranted.

I do, however, believe we must preserve and advance venerable social and security policies. Paramount among them are universal service, 911, law enforcement and disability rights. I recognize that IP services ride atop a physical layer that, in many

parts of our country, is still expensive to build and maintain. I am committed to ensuring that the entire nation has access to affordable communications services, as more and more communications move to IP networks.

We have begun laying the foundation for a comprehensive, yet minimal, regulatory environment for Internet voice application services. At our February meeting, the Commission adopted a Notice of Proposed Rulemaking to look at the issues surrounding these applications. We are working with our colleagues elsewhere in the Federal government and at the state and local level to develop a sound policy framework. We are focused on addressing and advancing our social objectives of public safety and 911, universal service, homeland security and access for people with disabilities. In addressing these issues, I have called for a series of Solution Summits. The first Summit is slated for March 18 and will address E911 capability. In addition, the Commission is working hard to reform our country's inter-carrier compensation regime. Finally, we are keeping a watchful eye for anti-competitive conduct by owners of broadband networks to ensure our citizens can tap the full potential of the Internet in a broadband world.

I would like to thank you, Mr. Chairman, for calling this hearing, and I look forward to working with you and other members of the Committee, my state colleagues, industry and my fellow commissioners on these challenging and critical issues.

Good morning, Mr. Chairman and distinguished members of the Committee. It is my pleasure to come before you today to discuss Internet voice services and the role of the Federal Communications Commission (the "FCC" or the "Commission").

Introduction

For the last three and a half years, I have engaged you and the Nation in a dialogue about the digital migration taking place across the communications landscape. The digital migration is about empowering consumers by replacing yesterday's slow, limited and generally monopolistic communications networks with multiple high-speed, dynamic and competitive full-service digital networks. Increasingly, these digital broadband networks, whether wired or wireless, are using the flexibility of Internet protocols to offer Americans a full suite of communications services—from voice to video to data.

We have worked hard at bringing these broadband Internet networks to each and every American at affordable prices. We have championed the deployment of multiple broadband networks in order to rid ourselves of the intractable "last mile" problem. We have pushed for greater deployment of DSL, cable modem, 3G wireless, WIFI, Ultra Wide Band, satellites and broadband over power lines, just to name a few new platforms already in commercial use. More broadband platforms mean more competition, more innovation and more tools to advance important goals such as universal service.

The Commission is mindful, however, that networks are valuable only if consumers use them to communicate, to entertain themselves, to work, and to learn. Although much of our focus has been on bringing these broadband Internet networks to each and every American, the Commission is now turning its attention to promoting investment, innovation and competition at the applications layer of the Internet. Internet voice services, coming in many flavors, are some of the first of many broadband Internet applications being adopted by consumers today. These exciting new services tap into the global and ubiquitous Internet to change the make-up of the communications and other industries daily—all to the benefit of the American people. Successful Internet applications are vital to our national broadband policy because they create demand and thus grow the network.

Today, Internet applications are bringing new competition to old markets and, in turn, ushering in an era of innovation, lower prices and high quality services. Just as e-mail and e-commerce were drivers of the narrowband Internet, higher bandwidth applications like streaming video and music entertainment, home networking and Internet voice will be the "killer apps" for broadband. Whether we are talking about Internet voice services, or Internet video and audio services, Internet news services, or Internet commerce, the broadband revolution is bringing tomorrow's communication and commerce tools to more and more Americans today. These new opportunities for consumers are also providing new opportunities for our Nation's economy. New opportunities for job creation can be found in building broadband networks and applications. Productivity gains for our economy continue as business and consumers increasingly unleash the power of broadband networks. At the same time, we are creating opportunities for small businesses and entrepreneurs to enter

previously prohibited communications markets at the applications layer of the network.

Although the prospects for the digital migration have been promising, to date, the realization of its potential and benefits for our country are far from certain. This country must continue to promote and adopt regulatory policies that promote investment and allow these new and emerging broadband Internet services to flourish. A failure to do so will lead to more outsourcing of high tech jobs and investment to foreign lands, leaving the most powerful nation in the world a second class citizen in tomorrow's growing digital economy.

At the same time, we must leverage these new technologies to ensure that many of our core, traditional and vital social objectives continue to be met. Regardless of the pace of technological change, we must remain committed to universal service, law enforcement access, E911 capabilities, and access for people with disabilities. And, we must effectively manage the transition from the analog to an all digital world to ensure that Americans relying on yesterday's communications tools are not left behind.

The Commission is hard at work on these issues. We continue to work to bring alternative broadband Internet distribution networks to the American people. We have begun laying the foundation for a "light touch" regulatory environment for Internet voice services. We are focused on addressing and advancing our social objectives of public safety, universal service, homeland security and access for people with disabilities. The Commission is also working hard to reform our country's inter-carrier compensation regime. We are working with our colleagues elsewhere in the Federal government and at the state and local level to develop a sound policy framework. Finally, we are keeping a watchful eye for anti-competitive conduct by owners of broadband networks to ensure our citizens can tap the full potential of the Internet in a broadband world. The public interest is our guide in our tireless pursuit to bring the vast benefits—both personal and economic—of the digital migration and broadband Internet service to every American.

II. Emerging Internet Voice Services—What are They?

With 50 million people (and rapidly growing) taking advantage of broadband Internet access, Internet-based services and applications have a promising year ahead. One class of applications, allowing for the transmission of voice communications, will continue to grow in many shapes and sizes. This application comes in many flavors, but has garnered a great deal of attention because it allows voice communications among users, much like traditional wired or wireless voice networks. Some of these Internet voice services will be delivered over the public Internet; others will use Internet protocols over private networks to reach end-users. Some of these services will be Internet-only applications; others will allow Internet callers to reach out to users on the public switched telecommunications network. Some will be pay services; others will be free or simple add-ons to other types of applications. All, however, will enhance our ability to communicate with each other.

Indeed, Internet voice services are evolving in a number of different ways. Some providers, like Vonage, are offering Internet voice services using the public Internet and a consumer's broadband connection to allow consumers to make calls to other broadband Internet users or to people using traditional plain old telephone service. Many cable operators, on the other hand, are offering IP-based voice services using their private digital networks to interconnect with the PSTN and not using the public Internet at all to transmit voice services. These types of voice services typically charge a monthly fee for a variety of different calling plans and features.

We are also seeing the development of computer to computer voice services. Free World Dial-up, for instance, employs peer-to-peer technologies to allow those using the service to transmit calls to one another. This particular computer-to-computer service is free to users. Internet voice capability is also built in to other services. For example, instant messenger software applications generally provide for voice add on features. Microsoft's Xbox Live gives those playing broadband video games the ability to talk to each other during play.

As you can see, we are entering a dynamic space in the evolution of Internet voice services and applications. As more people begin to take advantage of these new and exciting competitive voice offerings, we are starting to see substantial consumer and economic benefits of the digital migration emerge.

III. Benefits

As the digital migration continues in earnest, increasing numbers of Americans are taking advantage of the increased choices, lower prices, innovation and personalization that broadband Internet services and applications offer. It is noteworthy that these benefits are emerging almost completely in the free market environment.

IP-enabled communications are unleashing a torrent of innovative services and applications from many more sources than users of traditional communications services are accustomed to. In the voice space, for example, hungry, free radical entrepreneurs and software developers are taking advantage of extremely low entry barriers to pour investments into service offerings to take on established telephone industry giants. These industry giants are not, however, sitting still. Cable operators and traditional local and long-distance telephony providers are moving to IP-based voice products as a cheaper, more efficient way to deliver local and long-distance voice services to the public. The result is a degree of choice for consumers never before seen in the residential voice market. More Americans have more providers to choose from, more services to choose from and more devices to communicate with than in any time in American history.

With increased choice and competition come the additional benefits of lower prices and greater innovation. The same forces at play that are attracting entrepreneurs to enter the Internet voice business are allowing these and more established providers to offer consumers cheaper voice services. Lower entry and transaction costs are allowing Internet voice services to be offered at low prices, in some instances, for free.

The benefits do not end with competition and innovation for American consumers. Our economy is also seeing great gains from the digital migration broadly and Internet voice services specifically. As firms, new and old, continue to invest in broadband Internet networks and services and applications, we are seeing the creation of more technology focused jobs in our economy. Small businesses are using new technologies, such as Wi-Fi and WiMax to provide competitive last mile broadband Internet access. Not only are small businesses and entrepreneurs entering communications markets, small businesses are using broadband technologies and services to lower the costs of business (*i.e.*, using Internet voice services to lower yearly phone bills), to enter new markets and more efficiently and effectively conduct commerce with suppliers and consumers around the globe.

As these businesses spur economic and job growth through investment in broadband Internet services and applications, we are seeing durable productivity gains spreading throughout our economy. A recent Lehman Brothers report suggested that by 2007 investment in information technology will allow for productivity gains that will bring \$140 billion in savings to six major economic sectors.

These consumer and economic benefits are not, however, guaranteed. While Internet voice services offer great potential, they are also extremely easy to establish abroad. If we do not create the proper regulatory climate in the United States, it is quite possible our local calls will be routed through Canada and Mexico at cheaper rates, rather than through Kansas and Montana. We must adopt the right policies to foster investment, innovation and competition.

IV. Proper Policies

Economic Regulation

The development and success of the Internet has been a result, in part, of our Nation's desire to maintain its minimally regulated status. Congress was mindful of the danger of regulating Internet services. Indeed, in section 230 of the Communications Act Congress enunciated a national policy to promote the continued development of the Internet and other Interactive computer services and to preserve the vibrant and competitive free market for these services "unfettered by Federal or State regulation."

We will remain vigilant. As I recently described in a speech at the University of Colorado at Boulder, I believe that government and broadband providers should strive to achieve four key Net Freedoms: (1) *Freedom to Access Content*: Consumers should have access to their choice of legal content; (2) *Freedom to Use Applications*: Consumers should be able to run applications of their choice; (3) *Freedom to Attach Personal Devices*: Consumers should be permitted to attach any devices they choose to the connection in their homes; and (4) *Freedom to Obtain Service Plan Information*: Consumers should receive meaningful information regarding their service plans. These freedoms will preserve consumer choice, foster competition, and promote investment in infrastructure and Internet applications. If adhered to, they will also eliminate the need for much of the anachronistic common carrier regulatory regime.

Social/Public Safety Policies

There are at least four key areas where government should and must be engaged for the good of consumers: universal service, CALEA, E911, and access to people with disabilities. At our February meeting, the Commission adopted a Notice of Proposed Rulemaking to look at the issues surrounding these applications. We are

working with our colleagues elsewhere in the Federal government and at the state and local level to develop a sound policy framework. We are focused on addressing and advancing our social objectives of universal service, public safety and 911, homeland security and access for people with disabilities. In addition, the Commission is working hard to reform our country's inter-carrier compensation regime.

Before addressing each of these issues in more depth, I want to echo the Commission's recent announcement that we will be hosting a series of Solutions Summits in the coming months as we move forward with the IP-enabled communications proceeding to quickly address important social and public safety policies. The first of these summits will be held at the FCC on March 18, 2004 and will address 911 and E911 issues. I look forward to using these working sessions to develop real answers to these challenges thereby allowing these new technologies to improve our ability to achieve our policy goals.

Universal Service

IP communications represent a real opportunity to advance our universal service objectives, including ubiquity and affordability. New technology can reduce the costs of providing supported services, particularly in the higher-cost areas of our country. The introduction of technologically advanced, lower-cost networks also can have a positive effect on the high-cost fund over time, thereby limiting the burden our policies place on consumers.

Nonetheless, as we progress further in our digital journey, we and our colleagues at the state level will have to confront some significant challenges in the short and long term. Fully recognizing this challenge, the FCC is currently reexamining nearly every aspect of the universal service program, as I indicated in October, to ensure that the program is administered as efficiently and effectively as possible and that the overall program remains sustainable.

I assure you again today that I remain committed to the enduring goals of universal service. This digital migration cannot be complete or successful if there are portions of our population left behind. Voice service availability to all Americans will continue to be vital to the success of our Nation. I recognize that IP services ride atop a physical layer that, in many parts of our country, is still expensive to build and maintain. True to our Congressional mandate of comparable prices and comparable services, the Commission must continue to be sensitive throughout the digital migration to the rural areas of our country where the cost of service remains high and the march of technology can sometimes lag one step behind.

Some difficult times can be expected as competitive policy continues to erode implicit subsidies that skew competition while replacing them with explicit support mechanisms that are sustainable in a competitive environment. Nonetheless our universal service goals and our commitment to obtaining them remain unwavering. Our goal is to foster a system of universal service that is fair to all competitors in an increasingly competitive marketplace. Through our various proceedings and in cooperation with Congress and the states we will adopt the universal service fund to meet the progress of technology.

CALEA

Just as the near exponential rate of technological evolution has challenged the Commission, it has challenged law enforcement. New services like voice-mail, call forwarding, and mobile phones have required industry, the Department of Justice and the Federal Bureau of Investigations to work in concert with the Commission to ensure that the needs of law enforcement are met in a way that is not overly burdensome or too costly for consumers. So again it is with Internet voice services. It is our understanding that law enforcement will soon be filing a petition requesting that the Commission commence a proceeding to help set standards by which the success of CALEA with respect to earlier services can be extended to Internet voice services. The Commission will devote the necessary resources to expeditiously and responsibly complete this task. In the interim, it must be emphasized that carriers, the law enforcement community and the Commission are working in partnership to ensure that law enforcement retains access to the information they have now and to ensure that they have the tools they need in this ever changing environment.

911

Internet-based services provide a tremendous opportunity for improving our E911 systems. The existing 911 system is vital in our country, but limited functionally. In most systems, it primarily identifies the location from which the call was made. But an Internet voice system can do more. It can make it easier to pinpoint the specific location of the caller in a large building. It might also hail your doctor, and send a text or Instant Message alert to your spouse.

Our 911 potential is limited only by the infrastructure available and the creativity we employ in developing 911 applications. Already at least 10 Internet voice providers have entered into an agreement with the 911 association NENA to extend 911 capabilities to Internet voice services. The public safety community has been an excellent partner in this endeavor already and I look forward to additional progress at the Summit on March 18, 2004.

Access to people with Disabilities

Technology has consistently permitted Americans with disabilities to become more integrated and productive in their daily lives. We will not allow Internet-based services to fall short of this precedent. Given the Commission's strong record of action in this area and Congress's great leadership in passing the ADA, I am confident that industry will respond appropriately to ensure access by individuals with disabilities. I am pleased to announce that our Solution Summit on access issues will be held on May 7, 2004.

V. Recent FCC Actions and Next Steps

Against this backdrop, the Commission released a comprehensive NPRM to examine how best to address VoIP and granted the Petition filed by pulver.com at our Open Meeting on February 12, 2004.

In pulver.com, the Commission continues to encourage investment and innovation in the case where the voice application rides entirely over the Internet in digital form. Pulver's FWD allows users of broadband Internet access services to make VoIP or other types of peer-to-peer communications directly to other FWD members, *without* charge. In this petition the FCC looked closely at the FWD offering and concluded that it clearly fit the information service definition and could not be categorized as a telecommunications service. The record was nearly unanimous on this outcome.

The NPRM takes up each of the important policy areas addressed above. The NPRM also examines some of the important definitional debates surrounding Internet voice services, with a view to existing definitions and how those definitions might apply to today's changing communications environment. Once the NPRM is released, the Commission will build a record to determine where best to draw the line between the various flavors of Internet voice services, and to begin to determine how the social and public safety objectives can best be achieved when using IP-enabled communications. A full and robust record will pave the way for the Commission to adopt policies that facilitate economic growth, a more secure homeland, and preserve and advance universal service and access to people with disabilities.

I am pleased that we have made the progress that we have thus far and taken the first, bold step of granting the pulver.com petition and issuing the NPRM and I thank my fellow Commissioners for their hard work in getting this far. But our work is not done. Still other petitions remain before the Commission that involve different flavors of IP-voice services, with different levels of digitization and interaction with the public switched telephone network. Some cannot operate without use of the PSTN and offer little in the way of innovation for end consumers. Others involve the ability to bridge the old and the new. Each will have to be dealt with under its own merits, faithfully applying applicable statutes.

Among the open proceedings is a petition for declaratory ruling filed by AT&T regarding the applicability of access charges to particular types of VoIP services. I wish to emphasize that nothing in the NPRM discussed above will preclude the Commission from addressing pending petitions before the culmination of the rule-making. As my colleagues work to reach their own decisions in the still pending proceedings I want to assure you that I am deeply concerned that telephone rates in rural areas remain affordable. I fully recognize the gravity of any decision that might cause a precipitous decline in access charge revenues and a concomitant impact on universal service.

All of these decisions illustrate the importance of reforming our intercarrier compensation regime. We understand that the industry is hard at work to develop such a plan. I implore them to develop a proposal promptly. We have an open docket and I hope that the Commission will adopt a combined order and further notice of proposed rulemaking later this year. This item would take significant steps in the direction of a unified regime by providing immediate guidance on carriers' transport and interconnection responsibilities, and by soliciting comment on the legal and economic issues that must be addressed as part of a transition to a more rational and sustainable intercarrier compensation regime.

While many industry players have divergent views on the exact solution, nearly everyone agrees that the current system is broken. The Commission's intercarrier compensation docket provides an excellent opportunity to work together with all in-

dustry segments to replace a system built in a monopoly environment with one that is designed for a competitive market yet still sustains universal service. That policy decision will be essential if our Nation is to tap the full potential of IP-enabled services.

VI. Conclusion

In examining voice over IP, we should begin with the non-regulation of the Internet as the first article of faith because limiting government intrusions—both at the Federal and state level—maximizes the potential for innovation and increases opportunity for the Nation as a whole. There are clear exceptions to this rule—four of which are discussed above—where the security or well being of the Nation and the consumer will require our intervention. But we must be sure that such exceptions do not swallow the rule. Without a doubt, VoIP will revolutionize the way consumers work and play. The choice for us as policy makers is to create the kind of environment where these changes can flourish.

I would like to thank you, Mr. Chairman, for calling this hearing, and I look forward to working with you and other members of the Committee, my state colleagues, industry and my fellow commissioners on these challenging and critical issues.

The CHAIRMAN. Thank you, Mr. Chairman.

Do you have any response to Senator Alexander's testimony?

Chairman POWELL. Well, Senator, for 7 years I have sat in this well and been reminded not to do the legislature's business, and I think I will take that advice.

[Laughter.]

Chairman POWELL. I think our founding fathers were wise to vest those questions in the legislature of taxing authority. But I will say a couple of things.

The federalism system has often recognized the importance of the interstate commerce clause, and as well, the importance that certain economic activity, in order to prosper, often has to be regulated at Federal and interstate levels. And I'm not suggesting—I'm not going to weigh into the tax debate specifically, but I do think the federalism scheme includes and recognizes that sometimes technologies or commercial systems do begin to pour past their traditional jurisdictional boundaries.

I also would say that I'm not entirely clear that whatever decisions we make by VoIP will particularly undermine what you're attempting to do, one way or the other, in terms of the locus of the tax question. As I understand it, and as Senator Allen emphasized, the focus is on Internet access functionality. The key to understanding voice over Internet is to understand it as content, as an application, as something you use the Internet to go get and access. And to that extent, one could argue that, no matter how we classify it in the communications accents, where ever—you know, if you choose to focus on Internet access for taxation purposes, it's unaffected by our decision.

But I leave the harder questions to the Committee and to the Congress.

The CHAIRMAN. Throughout our history, there has been progress in communications and transportation and other forms of modernization. There was a time when the stagecoach stopped in every town. And then the railroad stopped in fewer towns. And now airliners fly over them. Is there a comparison to be made about these changes in what most of us understand have taken place throughout history in a comparison about what voice over IP is doing?

Chairman POWELL. Absolutely. I think you got it right, in terms of the proper analogies are really the development of transportation systems. So much of communications takes its history from transportation systems—the notion of what common carriage is. We even use some of the same lingo that we used about railroads. The “public interest standard” comes from the railroad industry.

And I do think that you just can’t ignore the changing character and nature of communications systems just because they’re inconvenient or they’re challenging or they’re difficult. We can talk about jurisdictional lines all day, but to describe the Internet in any terms other than a fantastic, global, end-to-end, network that is porous—laughing at brightly drawn jurisdictional boundaries developed by lawyers and legislators, I think, is to bastardize what the Internet is. And I think we can reach our public goals without really shoving it into a character that it doesn’t have.

The CHAIRMAN. So using that logic, if that comparison is a valid one, then we should be having some kind of revenue flow to the towns that are flown over by airliners now, rather than the railroads or the stagecoaches that go through them.

Chairman POWELL. One could make a similar argument, yes.

The CHAIRMAN. The reason why I tried to put it in those terms is, I don’t think most Americans understand this technology. And to say that somehow a phone call that is generated one place and crosses numerous jurisdictions, as Senator Wyden said, at the speed of light, it seems to me to want to continue to try to get revenue from that, when actually this is going to relieve people of an enormous financial burden, as far as the cost of communicating with one another is concerned. What is that benefit?

Chairman POWELL. Well, I think those benefits are tremendous. When you really begin to look at the economics of these networks, we’re looking at the potential for dramatically higher innovation, greater choice for consumers, much higher value—

Many Internet service providers—and I would submit to you, not just because of the avoidance of regulatory fees or taxes, but because of the beauty of the network—are offering consumers all-you-can-eat bundles that are higher and better values than what we’ve been able to produce for a hundred years, including a heavy system designed to subsidize those rates. To look at services in the marketplace today that are unregulated, offering \$14.99 voice service, or up to \$34.99 voice service, just to use Vonage’s range, that’s an amazing accomplishment before anybody’s come to help them figure out how to do that.

And I think what’s more important is the innovation that consumers crave, the personalization that consumers crave. Just as we, on our cell phones, like to choose our ring tones and our colors and our voice lists and our handsets, we are craving that same kind of personalization and innovation in all of our communications services. And I think that’s—

The CHAIRMAN. How do you squeeze in, now, in this deregulated scenario—or unregulated, in some respect—the requirement for 911 service, facilities for Americans with disabilities, all of those sort of fundamental services that we owe to certain groups of Americans?

Chairman POWELL. Yes, the first thing I—

The CHAIRMAN. Or certain occasions that may—

Chairman POWELL. Sure. The first thing I would say about that is, there are challenges, but the opportunities potentially far dwarf the challenges. For example, the 911 system, we absolutely should ensure as voice becomes a substitute for traditional services. But why stop there? The potential for first-responder systems that are much more sophisticated and capable live in IP. We're listening to people talk about a service where I call 911, and as soon as the dispatcher gets it, it assembles my medical records, it sends an instant message to my wife's cell phone, it notifies my doctor. We could have a system in this country, using voice over IP, that would dramatically improve, not just maintain, our 911 service.

So one of reasons we're excited about our solution summit is, for the first time ever we'll get to work on these issues from the ground up. We'll be able to work with the innovators and the industry and policymakers at the early stages. Unlike the wireless system, where we tried to retrofit 911 on an existing system, we'll be able to talk about it as a community from the bottom up. And I think we should give that community an opportunity to develop technical innovations and technical solutions through these partnerships before we're too quick to insist that we know exactly what 911 looks like, it should be the exactly the same as it has always been, lest we miss the opportunity for it to get better than it ever was.

But we should have no secret about the fact that if this service becomes a complete substitute to the traditional services, you'll absolutely want to ensure and be able to represent to families and communities that if you need emergency help, you're going to get it.

The CHAIRMAN. Thank you very much, Chairman Powell.
Senator Wyden?

Senator WYDEN. Thank you, Mr. Chairman.

Chairman Powell, thank you, and thank you for your involvement in this, dating back to the letter you sent me outlining your general views on this.

As you heard, Senator Alexander, in response to my question, said that he thought it was appropriate that state and local authorities have taxing and regulatory jurisdiction over voice-over. Now, given that, I think it's important to note that a 1999 study by the Committee on State Taxation found, nationwide, the average tax rate on telecommunications services was 18 percent, three times higher than the rate on all other businesses. Also, telecom providers have to file more forms. The list of challenges goes on and on. Do you think that applying these kinds of tax and regulatory burdens on VoIP is going to hinder the growth of broadband?

Chairman POWELL. Yes, unquestionably. I recognize that any responsible government has a need to raise revenue for general purposes, and even sometimes for specific purposes associated with the service, and I think all of that probably needs to be rethought as communications services change dramatically.

But we shouldn't trivialize the degree to which the additional costs and impediments to investment and innovation, particularly at a nascent stage, are impacted by either—there are only two ways, right? Raising costs or diminishing demand. And then you

don't have a market, you don't have an entrepreneur with an opportunity.

And I think this is something, Senator Wyden, you and I have talked about that I think people shouldn't trivialize. Sometimes the preference for the heavy regulation is perceived as helping the little guys to protect the big guys. I would submit to you, regulation, in this case, is the big guys' game.

If you ask the entrepreneurs you're going to talk to at the next panel, their fear is they don't have Washington offices with 35 attorneys in them dedicated to the FCC and dedicated to this Committee. They don't have the infrastructure in 50, 51 jurisdictions to go to PUCs and file certifications and tariffs and rate-making proceedings and accounting proceedings.

So you're talking about a huge order-of-magnitude increase in what it would take for them to successfully be in business, and I personally believe that would benefit large incumbency more than competition and entrants.

Senator WYDEN. I also am concerned that under the Alexander approach, VoIP providers could just move offshore. If you look, for example, at the fact that Internet services are global, couldn't offshore VoIP providers make themselves accessible to U.S. Internet users, and essentially provide the service that way?

Chairman POWELL. Yes. I actually think this is a very critical point, you know, and I lecture my staff, "Be cautious about futility." When you have something that you think is dependent on a physical location, you better realize there's no reason why that carrier has to be in your market.

You know, it's interesting, the cover of *Fortune* magazine a few weeks ago had two gentlemen on the cover, and it said, "These pirates invented Kazaa and almost brought down the music industry. They're trying to do the same thing to phone. Be interesting to talk to them, if you can find them." And we did, and we found them in Estonia. And they are the developers of a system called "Skype," which is a voice over Internet protocol system.

Vonage doesn't have to be in New Jersey. Nobody has to be in any particular location. These services can reach consumers from any corner of the globe. And I think, therefore, the United States has to think about not making its regulatory environment and its state economic development environment so hostile that we drive more jobs and more services offshore, or to other locations.

A major CEO of a company told me—I asked him, "How long would it take—a major company—to offer your voice over IP services from somewhere else, perhaps in Europe?" He said, "I could move the whole thing in 3 days."

Senator WYDEN. One last question, if I might, Mr. Chairman. VoIP and universal service, I think, is going to be particularly contentious as it relates to rural areas. You've given a number of speeches since that letter to me, essentially saying VoIP is going to reduce the cost of providing phone service, and that certainly is going to have ramifications for universal service. I think it is very likely that that will be the case in urban areas. But I've been hearing from a lot of rural folks that they're very concerned about how it's going to affect them, because very often they have transmission facilities in tough terrain, with scattered populations.

How would you, at this point, suggest that we proceed to make sure we tap the potential of voice-over, while, at the same time, being sensitive to these rural areas, who I think are going to be presented with some different issues than we'll see with respect to universal service in urban areas?

Chairman POWELL. Yes. And we should always be cognizant that their problems are, sort of, unique and have significant, sort of, intractability to them. But a couple of thoughts about that.

First of all, I think it's important to note that rural companies all over this country are just as interested in bringing advanced services to their constituents as anybody else. I just got back from two and a half days in rural Kansas, and many small companies, with tele-density of one home or two homes in a mile radius, have brought broadband to their consumers and are offering their services, and they're not afraid of the applications themselves.

What they're really pointing out is a problem that VoIP isn't causing, but is just another exacerbation, which is intercarrier compensation. We have a system in the United States that has been built in pieces over decades, in which different kinds of uses of the local NECR are compensated differently. If you use a local ILEC's network, and you're a wireless provider, you pay one set of fees through one compensation mechanism. If you're a long-distance company, you pay what we call access charges, and you pay a significantly higher amount for different kinds of services.

What's happening is, as we get to a packet-is-a-packet world, the compensation system is going to have to be revamped and harmonized so that market entry is not an arbitrage, but that everybody's being fairly compensated for use of the network. And I think if we fix intercarrier compensation correctly, we will take away the significant threat to rural America or the rural companies that are most worried about this. What this boils down to for them, almost singularly, is access charges. And we all know that access charges need dramatic and significant efforts at reform, and that's where we should focus that effort, and we will.

Senator WYDEN. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Sununu?

Senator SUNUNU. Thank you, Mr. Chairman.

With respect to that last answer, are you suggesting that you believe that all data should be treated the same way for the purposes of intercarrier compensation?

Chairman POWELL. I do ultimately believe data should be treated the same. I just think it's a tortuous path to get there.

Senator SUNUNU. What impact does that have on the current exemption for enhanced service providers?

Chairman POWELL. Well, I think that ultimately that is an exemption from the existing system of distortions, and I think one of the reasons that we're biased toward these kinds of exemptions when we have innovations, seriously, is we don't want to subject them to the tortures of the distorted system.

I think that if you actually harmonize the system, and people paid their fair share—I haven't met many companies that don't understand and respect that if I use somebody else's infrastructure, I don't get it for free. The thing that they are frightened of and attempt to avoid is, they don't want to be sucked into the really dis-

torted, highly inflated system of compensation that's been used before. So a lot of times, like in this case, when Internet comes along, nobody wants to subject them to access charges, so we create an exemption. When the exemptions start overtaking the rule, what you should stop doing is making exemptions, and start fixing the original rule in the first place, and I think that time has come.

Senator SUNUNU. I'm very mindful of the fear that can sometimes accompany the phrase, "I'm from the Federal Government, and I'm here to help you."

[Laughter.]

Senator SUNUNU. But bearing that in mind, is this a case where legislation might be helpful to the FCC, for us to take legislative action? Is that a plus or a minus in your mind?

Chairman POWELL. If done well, it's a plus. And I will tell you this, whether it's now or in the near future, it is my responsibility, as your expert agency, to tell you, I think the days are numbered on the way we're doing this under the current statute. I do believe there is going to have to be a statute in the future that recognizes these dramatic technical changes and gets us out of the buckets of the 1996 Act.

One of the reasons everything is hard at the FCC right now is not because we don't have good ideas of what to do. The problem is, once I think I know what to do, we spend hours, days, years in courts trying to figure out how to get there through the meanderings of the statute. And because there are always gray questions and there are always difficult judgments, it means there'll be 2 and 3 and 4 years of litigation subsequently arguing, you know, we interpreted it wrong, and the inherent remand. So, yes—

Senator SUNUNU. Are you suggesting that you're not as enamored of the 1996 Act as Chairman McCain is?

[Laughter.]

Chairman POWELL. Well, he's probably less enamored with it than me, but—

Senator SUNUNU. Industrial policy. I think Senator Alexander spoke about some of the current trends in regulation, and some of the legislative concepts and proposals out there, and suggested that they were acts of industrial policy.

In your testimony, you talked about replacing monopolies, you referenced Section 230 and quoted some language—I'm sure I didn't write it down correctly, but about promoting competitive environments and free markets. I think the word "unfettered" was part of the Section 230 language you quoted. Are those trends toward deregulation destroying monopolies, or creating free markets, acts of industrial policy?

Chairman POWELL. That's the softball we dream of. No.

[Laughter.]

Chairman POWELL. Absolutely not.

Senator SUNUNU. It may be a softball, but I think it's a very important distinction to make, because the language that we use is extremely important. And simply because we don't like the kinds of changes to incumbents that you were talking about—incumbent regulatory structure, incumbent tax base or revenue base, the incumbent businesses that are all going to be affected, potentially, by

this replacement of monopolies or this de-regulatory environment—I think it's wrong to characterize that as an act of industrial policy.

With regard to broadband deployment, do you think that the existence of a strong or healthy market for VoIP services will enhance the likelihood that broadband would be deployed? And how might that happen?

Chairman POWELL. Absolutely. You know, in preparing for today, I spent some time looking through every analyst's report I could get my hands on and looking what the market's done in the last three or four quarters. And for two and half, 3 years, we've all sat here and talked about how sad the telecom sector was and how far it had fallen, and how nobody was really winning. And in the last 3 to 4 months, we've seen a dramatic stimulus in capital expenditure as companies start to have to buy voice over IP equipment. We've seen the salvation of companies like Cisco, who have gone from the highest heights down to their back, who have transformed themselves into the VoIP space and are back. We've seen the stock rise of these companies. We've seen some of our most cherished assets, equipment service providers, like Lucent and Nortel and Cisco, who had stock down in the pennies, rebounding as people begin to flow money back into the sector for growth and economic opportunity. We've seen the potential for reversing job loss in the sector.

So, you know, when people cite numbers about what the costs might be, I often think about what the lost-opportunity costs will be for a sector, an economy, that continues to stop investing in infrastructure and innovation, that keeps firing people, continues to fall in capital investment. That is more threatening to our Nation's prosperity than anything the regulations are about.

Senator SUNUNU. Thank you.

The CHAIRMAN. Senator Cantwell?

Senator CANTWELL. Thank you, Mr. Chairman.

And thank you, Chairman Powell, for your go-slow approach on this technology. I think people, for all the excitement that's been generated today about voice over IP, I think people fail to realize that there are probably only about 200,000 people who are using voice over IP as their sole telephone communication system. So while we're seeing some great enterprise deployment, and that's about to become more rapid, this is still very, very nascent technology. The fact that, as I said earlier, you can't connect to each other with other systems, I think, makes the growth of that somewhat problematic as we move forward.

I have a question. You commented on the efficiencies of this packet technology, versus the circuit switch. Do you have any doubt in your mind that the incumbent telcos are going to switch over to this technology?

Chairman POWELL. Oh, no, no. They—not only are they going to; they have to. I mean, they have to.

Senator CANTWELL. Right.

Chairman POWELL. The key is, the future of all communications is whether you have an infrastructure that'll allow you to innovate into the digital applications of the future. If you're not, you're going to—my view is, you're going to get crushed.

Senator CANTWELL. So the question then becomes, with the incumbent player telecommunication companies who are going to move to this technology, the new emergent broadband heavyweights, cable companies, to the hybrid voice over IP solutions, to the pure voice over IP solutions, probably the least developed of the four, really it's a battle about how fast everybody's going to move to adopt this new technology. So isn't the question then, How do we maintain an open environment for competition during this time period so that that competition and deployment can happen and we can see who wins, as far as solutions? Because, ultimately, the consumer wins.

Chairman POWELL. I do agree with that, yes.

Senator CANTWELL. The one challenge I think that we end up having is, as this battle takes place, how do you have open access and interoperability standards? The first, I'd like your comments on that. Obviously, if—not to pick on any one cable company, but just for example—say AT&T became a dominant player in this area and ended up only having limited access, the only VoIP service you could get would be the AT&T bundled service. Do you think that's a problem?

Chairman POWELL. Oh, I think if that happened, that would be a problem. You know, I've thought a great deal about that and, a few weeks ago, at the University of Colorado, gave a speech about the importance of Net freedom, and laid out some basic principles that I think would guide my thinking and the Commission's thinking, and they included principles such as, consumers should be able to access broadband content of their choosing, they should be able to attach devices of their choosing. This has often been debated in some forums as the Net-neutrality position, although our view has some variants on it. And I think that's very important. Because I think if we see lots of broadband platforms competing for consumer services and access—we have a lot to be hopeful about there, compared to the past—and you have some general principles about, "If it's out there on the Internet and I've paid for my connection, I'm generally permitted to reach it and use it," then I think you have a really rich engine of competition and innovation.

Senator CANTWELL. So you would see it similar to what the AT&T/AOL deal was, in which you had to provide access to a variety of ISPs or something of that nature?

Chairman POWELL. Not necessarily. There are two things that are bantered around public policy today about access. One is that no matter who your infrastructure provider is, the consumer can go anywhere they want on the Internet. Then there's this—the idea that you should allow physical interconnection to other carriers, which is what the AOL/Time Warner question was about.

I've always been slightly more dubious of that second proposition as—not for the concern that it raises, but whether—the effectiveness of that approach.

I have watched us do the interconnection to the existing telephone system for many years now, and the ballooning regulatory structure that grows up around that, and the difficulty of stewarding it, and the power the incumbent has, in terms of interconnection, I think is a real challenge. A lot of people describe it, as Steve Case did back then, as, "Oh, it's just a light touch." But

we—it's called Section 251 in the telephone system, and it has been anything but light over the 8 years that we've stewarded it.

The issue—and I think you see more technology companies—like I know Microsoft has, sort of, moved away from that position, moving more toward the free—the open-access provision—is because there's a recognition that when you have IP and you have Internet-based, you can offer these services from different locations, virtually; and as long as the pipe provider is not permitted to choke off or refuse to allow those bits through, you can still get some of those same—that same open architecture capability that you crave.

Senator CANTWELL. Could I also quickly get your comments on this issue of interoperability? Because as it exists today, even though everybody uses SIP as a protocol to communicate with, I'm sure that a lot of people have—I don't know, but I'm sure we'll hear from various panelists—but I'm sure most people have a proprietary protocol that communicates with SIP, and, ultimately, we'll need a system in which everybody has interoperability. Do you think that that's best driven by the private sector in getting a standard, as opposed to us, like on HDTV or—

Chairman POWELL. Yes.

Senator CANTWELL.—coming in. So if you could comment on—

Chairman POWELL. I think you answered the question with HDTV.

I think that the Internet community and the high-tech community, while there are certainly other examples, have done a very powerful job, over the existence of the computer and software and the Internet, of demonstrating the power of the market and their self-interest in creating standardization. And not that I don't think you could envision a role for government one day, but I'm always—I'm generally not a fan of the idea at the earliest stages, when nobody even knows what SIP is, or while things are unsettled—I think standards are something you compete and innovate, as well. And you want the best standard, and you want the most innovative, and you want the most quality-oriented. And if the government, kind of, comes in, particularly really early, and says, "Oh, no. We're going to decide what it is," I think that the history of that is pretty poor around the world. I've seen it done in other countries, and they regret it. It often becomes too cumbersome, it doesn't evolve.

In this country, we had balkanized e-mail systems for a long time—in its early period, and there's a market reason why eventually people want that interoperability, and the e-mail system developed interoperability protocols without specifically a government agency doing it. I would hope, you know, similar things would happen with respect to voice.

But I would agree with you that for any network like that to reach its full value, full interoperability is essential, and I suspect they realize that, too. I don't think Vonage or 8x8 wants to tell its customers, "You can't ever call your neighbor if they're on the other system. I mean, I doubt anyone could secure enough of the Nation's 300 million people to make that strategy particularly viable.

Senator CANTWELL. Yes. I would just add, quickly, Mr. Chairman, I think that that is where, you know, we should tie our future look at this industry as we move toward interoperability. But we

have hundreds of groups and organizations working on it now, so we're a long way before this becomes a standard by which many people can deploy and communicate, so why start regulating it?

Chairman POWELL. I would agree.

Senator CANTWELL. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Allen?

**STATEMENT OF HON. GEORGE ALLEN,
U.S. SENATOR FROM VIRGINIA**

Senator ALLEN. Thank you, Mr. Chairman. Thank you, again, for having this most timely hearing.

Chairman Powell, let's get these definitions straight here and then get into—I'd like to question you on how we can actually enforce this, and how that might could have an impact on jobs here in this country.

First, the question here is voice over IP and whether it's a telecommunications service, or not. That issue has not yet been determined completely by you all. But even if voice over IP is determined to be, depending on how it—all the different configurations—even if voice over IP were to be determined to be a telecommunications service, it could not be used for Internet or to provide Internet access. Is that your understanding?

Chairman POWELL. Yes, it would seem to me that the touchstone is, "What's the definition of Internet access?" In the Telecom Act, there is a definition in, I think, Section 151(d), and as that description reads, which is what I'm familiar with, I don't think anything about what we're doing affects that at all. That definition speaks very clearly about, you know, separating the difference between the access, and physical layers and such, from applications, contents, and services. And the way I, at least, look at the development of voice over IP, it generally puts it outside—regardless of what we say it is in telecom statute—seems to me to put it outside of what you're specifically trying to reach.

Senator ALLEN. Right. And as I understand, Mr. Chairman, in reading your testimony here, you look at voice over IP more as an Internet application—it's an application, as opposed to an access.

Chairman POWELL. Yes. I mean, there is no question, as a technical matter, that is what it is.

Senator ALLEN. Now, since voice over IP is an application, as opposed to access, that solves the question on definition of what's an access tax versus taxes on applications. Then there are a variety of applications for broadband.

Now, if—and, really, voice over IP essentially is a software application provided over the Internet, broadband—now, could a company theoretically provide voice over IP outside this country?

Chairman POWELL. Oh, absolutely. And are right now.

Senator ALLEN. All right. And so in the event that they could—let's assume that the regulations—I want to use your—"this killer app here, unfettered by state or Federal regulations"—if they were more fettering, if they were more burdensome, could those voice over IP applications be—if they could be provided overseas, how would you have any jurisdiction or ability to affect those?

Chairman POWELL. You wouldn't. And the critical point that you're making, which I think comes up whether we're talking about

taxing, whether we're talking about law enforcement, whether we're talking about a lot of our goals, we have to be very, very careful, because if you're going to regulate on the assumption you can physically cap something where it is, you're making a serious mistake.

The last thing I would want to see this country do is create a hostile regulatory environment, a hostile technical environment, you know, an onerous enforcement regime, which would make setting up shop in other parts of the world more attractive, and taking with it the revenue associated with that company, taking with it the jobs associated with that company, taking with it the company that you can go and serve a subpoena on for catching the bad guys, because now he lives in a jurisdiction in which it becomes very complicated to do any of those things, and we lose our effectiveness, and we lose the economic benefits.

Senator ALLEN. Well, Mr. Chairman, I think—I have no further questions—the main point is, as they move forward—obviously this has nothing to do with our Internet access tax measure, but, more importantly, as decisions are made, whether by the FCC or in conjunction with this Committee and the Congress, we do have to make sure that what we do is not excessively onerous; otherwise, we're going to be losing those jobs, we're going to be losing that ability to affect companies that can virtually be anywhere in the world. And I know that you, Mr. Chairman, care a great deal, as do everyone in this Committee, about making sure the United States stays competitive for more investment and more jobs, as well as protecting our intellectual property.

And I thank the Chairman. You have a very difficult job, a balancing act, to determine these definitions. And once you determine those definitions, then, even if it is somehow a telecommunications service, not doing it—not burdening it in such a way as that it harms further deployment of broadband, reducing opportunities for jobs here in this country, but, in fact, driving jobs away, and companies away, from this country to provide those services, voice over Internet protocol, that I think people in this country look at as a great innovation for the future.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Lautenberg?

Senator LAUTENBERG. Thank you, Mr. Chairman.

I'd kind of like to see this discussion taken on a road show and explaining to the average citizen what it is we're talking about here, and see how they feel like they're really involved in—or else being cheated by things as they presently exist. I'd urge, someday, that a whole bunch of wordsmiths get together and simplify the language and the structure and have a better understanding of it, because it seems to me, at times, we're fighting for definitions.

I wonder, for instance—and I wasn't sure about Senator Allen's question—about whether or not the offshore prospect, the grim prospect that Senator Wyden offered and just discussed, might be just the fallout of the further development of even satellite technology, the fact that these messages can be transmitted so effectively through the use of satellites. We don't have any satellite broadband providers testifying here today, but what about the ease

of transmitting information being an assist for those who would take this business offshore?

I agree with you, by the way, on one thing, and that is that if we try to inhibit it by regulation or rule, that we're going to create a marketplace that we have absolutely no control over.

So what is the satellite provider's role here? Is there something we ought to be hearing from them on this Committee?

Chairman POWELL. Sure. I would actually encourage the Committee to begin to explore the many ways that technologies are coming to bear to deliver broadband. Satellites are doing it, so are the electric power guys, so are wireless, fixed wireless folks, so are people using all kinds of technology. And I don't think you can understand broadband any more—unless you think about it broadly and really explore all the people who are doing it, and see what their unique perspectives are.

You know, part of your question that—the distinction between the danger of satellite-delivered broadband versus, say, voice over IP over the Internet, one sometimes is just the, sort of, physical transaction costs of being able to do it. I mean, a satellite has to be licensed in a country, it has to get an allocation of spectrum from the ITU, it has to set up ground—physical ground stations to bring traffic down, and then has to be in a physical location. It is an interstate service; it's not regulated at any level other than the Federal level, for example, because of its ability to pass by jurisdictions, just like wireless telephones are. Those are interstates communications services. Because it would be nonsensical for them to be regulated on a jurisdiction basis.

So, you know, there are a lot more physical presence of a satellite than there might seem. The problem with Internet protocol—or the problem and opportunity—is the ease and almost anonymity of really being able to serve services without any sense, on the users' part, of whether you're looking at a site in London, or you're looking at a site in Singapore, or you're looking at a site next door to your neighbor. And that provider can be relatively seamless and anonymous. And the barrier to entry is so low, it just doesn't take anything, really, to set up a server and connect it to the Internet from any location in the world, and be able to reach your neighbor just as easily as someone else.

Satellites do continue to have more kinds of physical restrictions. I mean, latency in space, 26,000 feet, they're expensive, huge, you've got to license them, you've got to build them, there are other—you know, the Internet is an order of magnitude more porous, globally, than any satellite.

Senator LAUTENBERG. You know, I'm curious about something, and that is, what are we missing now, in terms of making available VoIP services? Is there any inhibition as a result of Internet access fees? There seems to be no shortage of capital around. Is there—what is the problem that we have to try to fix by regulation, if any?

Chairman POWELL. Well, I think that is the fight. I don't see a lot of problems that I don't think the market can solve. The questions is—there are a couple of palls hanging over—clouds hanging over the industry that I think, if anything, may dissuade some investment. One, I think this market—both the application providers, the service providers, the infrastructure guys who want to buy all

this equipment—are looking for a clear sign that the government is going to let this unfold in the way that it currently exists, or that—you know, everybody acts like we’re changing something. The question is, we’re not—I disagree with that vehemently. You know, a lot of these people are outside this regime now. To regulate is to bring them in the regime, not to transform them from being in it to out of it. And I think they’re looking—there’s an uncertainty element that they’re looking for signs from the commission, from the Congress, and from governments, that they intend to let this unfold in this way, so that that little bit of uncertainty risk—

I think there are market challenges. I’d describe them as market challenges. You’ll hear, in other panels, about, a consumer is going to want to know about 911 if you’re asking them to cut the cord from one service to the other. And I think they have a burning imperative to be able to sell their service, to tell the consumer, “You’ll be able to do that,” if I’m asking you to leave your service. Those are issues in the marketplace.

But from an economic standpoint, I think—I really do believe that the greatest threat to the service is not venture funding or capital or the interest of the market; it’s the regulatory threat. It’s the threat of whether those costs are the ones they see now, or if I’m Cliner-Perkins or Verchefirm, do I gotta factor in the 30 lawyers you’re going to need in every jurisdiction in the United—I mean, because you can destroy that business model very, very quickly if those additional costs are associated with your business.

Senator LAUTENBERG. Thanks very much, Mr. Chairman.

The CHAIRMAN. Senator Breaux?

Chairman POWELL. Thank you, sir.

The CHAIRMAN. Senator Breaux?

**STATEMENT OF HON. JOHN B. BREAUX,
U.S. SENATOR FROM LOUISIANA**

Senator BREAUX. Thank you, Mr. Chairman. And thank you, Mr. Chairman, for being with us. Happy Mardi Gras.

Chairman POWELL. Thank you.

Senator BREAUX. Technology is truly amazing. On my Internet in my office here, I can get video and voice data of Bourbon Street right now.

[Laughter.]

Senator BREAUX. It’s absolutely astounding. It’s also uncensored, and—

[Laughter.]

Senator BREAUX.—it’s probably—

Chairman POWELL. It’s a new get-tough indecency thing going on.

Senator BREAUX.—it’s probably—

Chairman POWELL. You might want to be careful.

[Laughter.]

Senator BREAUX. Time Warner will testify that the Voice over Internet Protocol that they provide is really true facilities-based competition and telephone service. And when we wrote the 1996 Act, we were talking about that. We wanted true facilities-based competition. We tried to get it by requiring a number of things in

rules and regulations of the telcos, all the things that they had to do that nobody else had to do.

It seems to me that if now we have a new system coming in and providing, as they term it, true facilities-based competition, which they say feels just like conventional telephone service, that we still have a disparity in the rules and regulations in the balance between what telco companies have to do, in terms of Section 251 requirements, and all the things that we listed that they require. They have to go through the whole checklist of interconnection and duties to negotiate and, some would argue, to have rates that are charged that are less than the cost of providing the service. It seems to me that when the cable companies come in they are able to provide video, like I mentioned, and voice, just like telephone service. It seems to me that there is an imbalance. We talked about the level playing field we were trying to reach. Can you followup? Do you agree with that I'm saying? Do you disagree with it? If you—can you elaborate on that?

Chairman POWELL. Yes. In short, I agree with you, and we have to get there. The challenge here is the path and the timing of getting there. This is why I really do believe that someday, in the not-so-near future, you'll really have to re-calibrate the law, because that's one of the arbitrary differences. It's going to be all over the map. You're not going to—I don't know how, in the near future, I'll stand before—or my general counsel will stand before a court and explain why these things apply to this guy, and these things apply to this guy, when their services being offered are almost identical, and the only reason is because of who your parents were—

Senator BREAUX. Well, I think that you—

Chairman POWELL.—you know, what your legacy was.

Senator BREAUX. I mean, you're going to see advertising from the cables saying "just as good, if not better than your traditional telco phone service, that this is true facilities-based competition. It's even better than that, because we're giving video." With all the video programming that they can apply to it, it's going to be a hugely attractive venue to offer to the public, which is fine, and we should encourage that, but then you still have another set of providers that are under a different set of rules and regulations about leasing their own equipment and everything else in Section 251.

What percentage does the FCC estimate of the telecommunications traditional telephone service would be acquired by the new facilities-based competition coming from cable? Is there a ballpark figure? Is it going to be 10 percent? Can it be 50 percent? Can it ultimately replace it? Any comments on that?

Chairman POWELL. Yes. I don't know a number, off the top of my head, and I'll look for you. But a couple of things to keep in mind. If you just looked at broadband access, the cable industry probably has 60 to 70 percent of all broadband access; they're going to deliver telephony over that infrastructure. So they have a relationship with—to leverage—

Senator BREAUX. The installation of the wire to the house is already there.

Chairman POWELL. It's a relatively modest incremental add for them. And the only argument, of course, is the degree to which competition is important to us that we've subsidized it in different

forms, either directly, like we do with universal service—and, by the way, you know, back to Senator Allen's point, the unbundling network regime in 251 is unquestionably a dramatic industrial subsidy to incent competition. It's not something new to communications.

Senator BREAUX. Well, then——

Chairman POWELL. But I——

Senator BREAUX.—the question becomes, if the competition is there, are the economic incentives——

Chairman POWELL. That's right.

Senator BREAUX.—structured by the Congress necessary?

Chairman POWELL. That's right.

Senator BREAUX. And if we wanted to eliminate those, how would we go about doing it, from a legislative standpoint?

Chairman POWELL. Well, I know you had one approach, which is that legislation——

Senator BREAUX. So did you. Neither one of us won.

Chairman POWELL. I think that there is modest room, within the statute, that we can muddle through, but I am quite convinced it won't get you all the way there. I am quite convinced that, you know, the unmovability of certain aspects of this statute make it very, very hard to harmonize different services and intercarrier compensation. And that's why I do think it's constructive to be talking about legislation.

And we have new insight. It's not just competition. And I think a few years ago when we were talking about this issue, we were talking about the equities of just competition. Now we have technology. There's a problem—you know, it's four-dimensional chess now. It's not just the binary—is it fair, these guys dominate, these guys dominate. You have the economic variations, but then you have the reality of the technology, which I think is even more powerful, because it can't be stopped. This isn't just a choice of which industry you favor or which—you know, which one's arguments you're more persuaded about. I can't stop the IP—no one's going to stop it. We don't want to stop it.

So these distinctions are getting obliterated, less because of—you know, cable has been sitting relatively quiet on this voice thing until IP comes along, and so the—yes, all of that means it's time. It's time to start working on it.

Senator BREAUX. Thank you, Mr. Chairman.

Thank you.

The CHAIRMAN. Mr. Chairman, just one additional question. Should the Commission impose network-neutrality requirements on broadband providers to ensure the availability of unaffiliated providers of VoIP or other services?

Chairman POWELL. Not yet, but it should be vigilant. I gave a speech—this is the speech I was referring to earlier, which I would submit for the record—which talked about that these are important principles, and that while we haven't seen significant evidence of anyone doing anything but allowing that, I do think that if we saw that in a widespread way or a significant way, that the commission would take an interest in it and would have to consider whether any response was warranted, yes.

The CHAIRMAN. I thank you very much. It's great to have you back.

Chairman POWELL. Thank you.

The CHAIRMAN. We appreciate very much your help in this very interesting and exciting new technology. Thank you, Chairman Powell.

Chairman POWELL. Thank you, Senator.

The CHAIRMAN. Our next panel is Mr. Jeffrey Citron, who's the Chairman and Chief Executive Officer of Vonage Holdings Corporation; Mr. Glenn Britt, Chairman and Chief Executive Officer of Time Warner Cable; Mr. Glen Post, Chairman and Chief Executive Officer, CenturyTel, Incorporated; and the Honorable Stan Wise, President of the National Association of Regulatory Utility Commissioners; and Mr. Kevin Werbach, who's the Founder of Supernova Group.

Welcome to all our witnesses. Mr. Werbach, we'll begin with you, sir.

**STATEMENT OF KEVIN WERBACH, FOUNDER,
SUPERNOVA GROUP, LLC**

Mr. WERBACH. Thank you, Mr. Chairman and Members of the Committee. Thank you for the opportunity to testify here today.

I'm the founder of the Supernova Group, an independent technology analysis and consulting firm. Earlier in my career, I had the honor of serving at the FCC as counsel for new technology policy, where I participated in the FCC's early efforts, nearly a decade ago, to understand the emerging technology that we then called Internet telephony.

I'm here to tell you that Voice over IP presents tremendous opportunities for the U.S. economy and the American people. As my written statement explains in more detail, we are witnessing the most significant transformation in telecommunications since Alexander Graham Bell called out for Mr. Watson.

Historically, telephony and other services, like broadcasting, were tied to specific infrastructure and regulatory regimes. The service was the network. In the converged digital world, however, there is one network of networks, the Internet, bound together with common technical protocols. Instead of data as a service delivered through voice-oriented telephone networks, voice is becoming a class of applications on top of data networks. To a data network, a voice call is nothing more than an instant message with particular latency and reliability characteristics.

Consider this device. This looks like an ordinary phone, but it's actually a voice over broadband endpoint. Instead of an RJ-11 telephone jack, it has an ethernet port on the back. But should regulation and obligation depend on the shape of a jack? Or should it depend on the shape of the device?

Consider this. This actually came from Mr. Citron's company, Vonage. This device doesn't look anything like a phone, but it does essentially the same thing as the previous one, without a keyboard and speakers and a microphone.

Or what about this device here? I don't think anyone would think that this was a phone. But I can load a piece of software, called

a soft phone client, on my laptop, plug in a simple headset, and use it to engage in voice communication.

So if I take the laptop and use it to communicate with my friends, who is the service provider that would be subject to regulatory obligations?

The CHAIRMAN. We proceed here on the premise that there's no such thing as a dumb question. How does that work?

[Laughter.]

Mr. WERBACH. Certainly, Mr. Chairman. It's an example of voice as an application. I load the software, and the software actually converts my voice into Internet protocol, and then it comes out the back as data, just like any other data coming out.

That's what it means for voice to be an application, and that's what poses this challenge. Because if we say VoIP should be regulated, what's regulated? Are we regulating the software provider? Are we regulating IBM for making the laptop? Are we regulating the company that makes my broadband service, even though they don't know what software I'm loading on my laptop? What happens if I'm connecting to this laptop on a WiFi wireless connection in Starbucks? What happens if the application isn't running on a laptop, but it's running on a handheld personal digital assistant? Those are the kinds of questions that we face.

And it doesn't end there. I can buy a \$50 webcam, plug it into my PC, and use it to engage in multipoint voice and videoconferencing all around the world, or I can subscribe to the online service that comes with Microsoft's Xbox or Sony's PlayStation online gaming consoles, plug in a headset, and use it to chat, by voice, with other players in the same game. Both are voice over IP applications.

Even the push to talk services that many cellular carriers are now deploying are actually voice over IP services, a parallel voice over IP channel alongside the cellular network.

As these examples show, VoIP is much more than services that may look similar to traditional circuit-switch voice telephony. Trying to separate out regulated from unregulated VoIP will be an unenviable and impossible task.

Engineers use the concept of layering to describe how data networks operate. The underlying physical transmission is a separate layer from higher-level application functionality, just as cars are separate from the highways that they drive on. A layered approach to communications regulation would distinguish among content, applications, addressing, and physical transmission. Open and non-discriminatory connectivity between these layers ensures innovation and competitive deployment of new applications.

In considering the policy concerns we've been asked to address, we must step back and examine the point of existing regulatory obligations and taxes, and then we must adapt our policy approaches to reflect the changes sweeping the industry. As Chairman Powell stated, the current systems of universal service funding and inter-carrier compensation must be reformed if universal service is to endure. Such reforms will only succeed if all parties have a reason to come to the table. It would be a sad irony if our attempts to impose regulatory obligations on VoIP limited deployment of tech-

nologies that can help bring affordable advanced communications to all Americans.

For other social policy obligations such as law enforcement access, disability access, consumer protection, and emergency services, voluntary industry efforts should be given an opportunity to work before Congress and regulators consider the need for the targeted action.

With VoIP, we are seeing the Internet realize its destiny. We can embrace that future, or we can try to pull the Internet back into yesterday's regulatory system. Make no mistake, broadbrush regulation of VoIP is tantamount to regulation of Internet applications. From the network's perspective, a stream of voice bits is no different from an eBay auction or a Google search.

If the U.S. is to remain the leader in the information-driven global economy of the 21st century, we must continue our enlightened policies to favor innovation and competitive markets while remaining committed to our central social goals. And I commend the Committee for holding this hearing and taking on these important issues.

[The prepared statement of Mr. Werbach follows:]

PREPARED STATEMENT OF KEVIN WERBACH, FOUNDER, SUPERNOVA GROUP, LLC

Mr. Chairman, and Members of the Commerce Committee, thank you for the opportunity to testify on the implications of voice over Internet protocol (VoIP) technology.

This is an extraordinarily important issue for the U.S. economy and the American people. We are witnessing the most significant change in telecommunications since Alexander Graham Bell called out for Mr. Watson. The growth of IP-enabled communications signifies nothing less than the transformation of the telecom industry, and the entire information sector that depends upon it.

The decisions regarding VoIP that the Congress, the FCC, and state regulators make will determine the path of this transformation. Will we try to put the genie back in the bottle, by subjecting VoIP and other real-time Internet applications to legacy regulatory obligations? Or will we take a forward-looking approach, recognizing the extraordinary economic benefits VoIP can provide, and continuing America's global leadership in information and communications technology? That is the fundamental choice this committee faces today.

I am the founder of the Supernova Group, an independent technology analysis and consulting firm. Earlier in my career, I had the honor of serving as Counsel for New Technology Policy at the Federal Communications Commission. I participated in the Commission's efforts, beginning nearly a decade ago, to understand a new phenomenon we called "Internet telephony." The FCC wisely decided to allow that technology to develop outside the constraints of legacy common carrier regulation. Following its longstanding approach to "enhanced" or "information" services, the FCC created a space for the nascent VoIP technology to develop.

As a result, investment and technological innovation has driven rapid development of VoIP, despite an extended downturn in the communications sector. The growth of VoIP has occurred not because it's a regulatory arbitrage trick, but because it's a better technology. It is more efficient, and more flexible, than the legacy circuit-switched technology. That is why all significant industry participants, including the Regional Bell Operating Companies, are deploying VoIP equipment within their networks in place of circuit switches.

This is a true success story of regulatory forbearance creating new growth opportunities. VoIP is already used significantly for office phone systems and for national and global backbone transport. Cisco alone has sold more than two million IP phones to enterprise customers. And research firm IDC estimates that 10 percent of worldwide voice traffic already uses VoIP technology in some manner.

The widespread rollout of broadband has created an opportunity to deliver VoIP directly to end-users as an application on top of data connectivity. This is a crucial conceptual shift, which I will explain later in my testimony. As a practical matter, broadband deployment allowed new entrants like Vonage and Packet8 to inject new competition into the local phone market. More than 100,000 Americans now sub-

scribe to consumer voice over broadband offerings. And major players such as AT&T, Comcast, Time Warner Cable, and Qwest have announced plans to launch voice over broadband offerings in the near future. In short, VoIP is helping to fulfill the promises of competition, lower prices, and innovation that Congress hoped to achieve when it passed the Telecommunications Act of 1996.

It is now time for government to address the thorny policy issues that VoIP raises. The greatest threat to the continued growth of VoIP today is regulatory uncertainty and a patchwork of inconsistent decisions by state regulators and the FCC. We need a national policy that encompasses VoIP and the intertwined issues of universal service and inter-carrier compensation.

What VoIP Is . . . and Isn't

Voice over IP isn't simply another form of telephone service as we know it. It is the leading edge of a new communications paradigm. Until now, telephony has been tied to a specific kind of network and a particular industry structure. The service and the infrastructure were one and the same.

In a digital broadband world, however, there is one network of networks tied together by common technical protocols. The infrastructure that delivers Web pages and files can also carry voices and moving pictures. Voice is just one class of application, which can be implemented in many different ways. And telephony is just one of a plethora of voice applications.

It's worth explaining what I mean by voice as an application. The Internet is a connectivity platform. At its core, it is a set of technical and architectural protocols for interconnecting digital networks. Those networks can incorporate any physical media capable of carrying digital bits, and they can transport any application or content that can be encoded into those digital bits.

To a data network, a voice call is nothing more than an instant message with different latency and reliability characteristics. And indeed, all the major instant messaging providers such as Yahoo! and AOL offer voice chat capabilities in their applications today.

Because voice is an application in an IP world, it need not be tied to transmission facilities. I can load a piece of software called a softphone client onto my laptop computer or a handheld personal digital assistant and turn that device into a voice communications end-point. If I then use that device to call my friends, who is the service provider that would be subject to Title II regulation? The software vendor? The laptop manufacturer? My broadband provider? What if I'm online through a WiFi wireless hotspot in a Starbucks?

I can now buy a \$50 Webcam from a company like Logitech, plug it into my PC, and use it to engage in free or very low-cost videoconferencing with other computer users around the world. Or I can subscribe to the online services associated with Sony's PlayStation and Microsoft's Xbox video game consoles, and chat live with other players in the same game. Or I can download a piece of free software called Skype and use it to make calls to other Skype users through a web of direct peer-to-peer connections, with no central network. Skype has announced free five-way conferencing, so that every call can instantly become a multipoint conference.

As these examples show, VoIP is much more than services that may, from a distance, look similar to traditional circuit-switched voice telephony. The legacy telecom regulatory framework is based on the idea of a call that originates and terminates between subscribers at defined locations, through a circuit established by one or more carriers. None of these concepts necessarily endures in an IP world.

Trying to separate out unregulated from regulated VoIP applications will prove to be a futile exercise. For example, if the full panoply of legacy regulation and taxes apply to a service that uses an ordinary-looking phone, providers will have incentives to make their terminal equipment look less like an ordinary phone. Instead of engaging in regulatory whack-a-mole, we must step back and examine the point of those obligations and taxes.

The Layered Model

All of this leads to the question now before this Committee: what policy approaches to VoIP will best serve the interests of the American people?

Let's be clear on what is not in dispute. No one in the VoIP debate questions that law enforcement agencies should have access, subject to appropriate procedural safeguards, to the information they need to do their jobs. No one questions the need to support emergency services such as 911, or to ensure that Americans with disabilities have access to essential communications services. And no one questions the enduring value of universal service to ensure that all Americans receive the benefits of telecommunications.

However, we must recognize that the communications world is changing. The way we meet those essential goals will change along with it. Just because certain mechanisms were used in the past doesn't make them sacrosanct. And if the system is flawed, or has not kept up with the rapid pace of technological development, we should not curtail that development in an effort to fix it. The challenge is to achieve our essential social policy goals at the least cost to innovation, investment, and competition.

I'd like to offer a general framework and a specific set of recommendations.

As a general matter, the legal framework for converged data networks should reflect the architecture of those networks. Engineers use the concept of layering to describe how data networks operate. The underlying physical transmission is a separate layer from the addressing and routing mechanisms that deliver traffic to the right points on the network, which is separate from the applications that encode and decode that traffic, and which is separate from the traffic itself. Open connectivity between those layers ensures innovation and competitive deployment of new applications.

The traditional communications regulatory framework classifies services into horizontal categories such as telecommunications and broadcasting. From that initial classification flow a host of legal obligations. If VoIP and other real-time Internet applications are deemed telecommunications services under the 1996 Act, they would be subject to the full panoply of regulation designed for circuit-switched carriers.

A layered approach to communications regulation, which I have outlined in some of my writings, would approach the problem differently. It would distinguish among content, applications, addressing, and physical connectivity. Competitive issues of market power and interconnection primarily concern the physical layer. If the physical layer is open, there is little or no need to regulate what runs on top. That is the lesson of the Internet, which emerged because Internet service providers and application providers like Yahoo!, Amazon.com, and eBay had nondiscriminatory access to underlying telecommunications networks.

The FCC, in its recent decision that *Pulver.com's* Free World Dialup service is an unregulated information service, effectively found such a layered model already present in the 1996 Act. The statutory distinction between telecommunications services and information services, derived from the FCC's earlier basic/enhanced division, recognizes that data applications ride on top of regulated transmission pipes.

Of course Congress, unlike the FCC, has the power to change the Act. Any reform of the 1996 Act should make the data-centric, layered model more explicit. IP is the future of the network.

Specific Policy Issues

Turning to the specific questions we have been asked to consider for this hearing, there are three kinds of policy obligations that potentially impact on VoIP:

- Economic regulation to ensure effective market competition.
- Universal service policies designed to achieve social goals for availability of telecommunications itself.
- Policies to support other social goals, such as law enforcement, access for people with disabilities, emergency services, local taxation, and consumer protection.

It seems quite clear that the bulk of the economic regulation in Title II of the Communications Act should not apply to VoIP. Common carrier regulation was designed for dominant incumbents like the old AT&T and today's Baby Bells. In the VoIP space, there is no such incumbent. Moreover, so long as the incumbent network owners do not discriminate, there will never be a VoIP provider with that degree of control. VoIP is an application using standard protocols. The barriers to entry are low, and the opportunities for innovation are high.

Application of legacy regulation to VoIP would do more than just stifle innovation in new competitive phone services. It would cast a pall of uncertainty over the entire technology sector. Would Microsoft be subject to those obligations for its Xbox Live online gaming chat service? Would a software provider that sells a VoIP softphone client to run on a handheld PocketPC or Palm device? Would Intel, for putting voice over WiFi phones into its reference designs for laptops, as it did last week at its developer forum?

Universal service raises somewhat different issues. It is a collective benefit that requires collective contributions. It would be a sad irony, though, if those contribution obligations stifled the deployment of affordable and innovative new service offerings. We must distinguish universal service, the important public policy objective, from the existing maze of hidden cross-subsidies and regulatory charges.

Moreover, just because some applications do not explicitly contribute to universal service funding mechanisms does not mean they provide no support to the system. Free World Dialup may be free, but its users must pay for a broadband connection, typically to a local phone or cable operator. Companies such as Vonage and AT&T pay for the circuits, transport, origination and termination they need to deliver their VoIP traffic. A portion of those payments makes its way into universal service funding mechanisms.

When the topic is VoIP and universal service, the elephant in the room is access charges. Whether VoIP applications are subject to access charges is not the same question as whether they contribute to universal service. Access charges are the non-cost-based, regulated rates that local exchange carriers charge interexchange carriers for originating and terminating telecommunications traffic. They are a descendant of internal accounting transfers by the old Ma Bell, subjected to twenty years of regulatory tinkering and industry horse-trading. They are just one of several inconsistent inter-carrier compensation regimes that telecommunications providers face, depending on the legal classification of traffic. The current system is artificial and unsustainable.

Inter-carrier compensation needs to be reformed for the U.S. telecom industry to move forward. The industry knows it. Press reports suggest that local and interexchange carriers have been negotiating to develop a consensus proposal for inter-carrier compensation reform. The FCC is also looking to act. Those efforts will only succeed if all parties have a reason to come to the table. Subjecting VoIP to access charges, especially before comprehensive inter-carrier compensation reform, would be the best way to derail those much-needed reforms.

VoIP is just one factor putting pressure on the universal service and inter-carrier compensation regimes. Eight years after the passage of the 1996 Act, we still do not truly have the competitively-neutral, transparent, portable, explicit universal service funding system that the Act envisioned. Given the money at stake, this is the Bermuda Triangle of telecom regulation. Yet we must go there, if we want universal service to survive in the IP communications era. Attempting to regulate VoIP will not make the challenges facing universal service funding go away. It will simply create more confusion, limit competition, and delay the inevitable.

The layered model suggests a possible alternative path to achieve our universal service goals. Take a look at the personal computer industry. Different companies make chips, build components, assemble computers, and develop software. Every layer is a platform. Competitors in each layer work to reduce prices and improve quality, with stunning results. The PC you buy today is many times more powerful than the PC you could buy five years ago, and sells for half the cost. Once only for the wealthy, PCs are now in two-thirds of American homes, and the number continues to grow. All without any government-mandated subsidies.

The telephone business should follow the same path of rapid price reductions and performance enhancements as the PC business. Already, VoIP providers are introducing new price points and innovations such as area code mobility, real-time billing and service provisioning, and easy conference calling. They should be encouraged, not restrained.

Finally, we come to social policy obligations such as CALEA, disability access, consumer protection, and emergency services. Especially in the post-9/11 era, there is no question that law enforcement authorities must have the tools they need to do their jobs. CALEA is one arrow in the quiver of law enforcement agencies seeking information to aid their investigations. It is not the only tool they have available. And even if VoIP application providers on top of telecommunications networks are not subject to CALEA, the telecommunications service providers they depend on still are. Furthermore, because VoIP decouples the voice application from underlying transport, the provider that interfaces with the end-user may only have access to the call routing information, not the content of the communication.

The VoIP community must continue to work with law enforcement and national security agencies to find the most appropriate technical mechanisms for lawful access to information needed to support investigations. The FCC has announced its intention to launch a CALEA proceeding in the near future that will provide a public forum for these issues. There is no reason to short-circuit those processes.

Similarly, there is no reason to assume that, without rapid application of traditional Title II regulation to VoIP, the other social policy objectives mentioned above will not be met. As with law enforcement access, there may be alternative sources of legal authority. Furthermore, VoIP providers have already developed voluntary mechanisms to achieve goals such as interconnection with 911 and other public safety systems. Such industry efforts should be given an opportunity to succeed. If they do not, or cannot, achieve the necessary objectives in a reasonable period of time, regulators and Congress should consider the need for targeted action.

Applying the full legacy regulatory regime to VoIP and other real-time Internet applications, simply to ensure that particular social policy objectives are met, would be a colossal case of the tail wagging the dog.

Conclusion

Over the past decade, we have seen the benefits of a policy approach that shields Internet-based applications from unnecessary application of legacy regulation. Congress expressed its desire for an unregulated Internet in the 1996 Act, and the FCC has followed that direction in its regulatory proceedings.

With VoIP, we are seeing the Internet realize its destiny. It is evolving into a converged network of networks that delivers an array of advanced applications, services, and content to all Americans. Perhaps even more powerfully, it is allowing individuals themselves to create and share information with their families, friends, communities, and extended social networks.

We can embrace that future, or we can try to pull the Internet back into yesterday's regulatory system. Make no mistake. Broad-brush regulation of VoIP is tantamount regulation of Internet applications. From the network's perspective, a stream of voice bits is no different from an eBay auction or a Google search.

The U.S. led the world in Internet deployment. Other countries are rushing to catch up, and by some measures such as broadband penetration they have surpassed us. If we are to remain the leaders in the information-driven global economy of the 21st century, we must continue our enlightened policies to favor innovation and competitive markets, while remaining committed to our essential social, public safety, and national security goals.

I commend the Committee for recognizing the need to address these critical issues.

The CHAIRMAN. Very interesting.

Mr. Citron?

Senator LAUTENBERG. Mr. Chairman, may I just welcome Mr. Citron, whose company has made remarkable progress in a very short period of time. And they are significant providers of VoIP services. The company started out very small, and it has now got 100,000 subscribers. So the industry is moving, and this is excellent evidence of that, and I welcome Mr. Citron.

And I thank you, Mr. Chairman.

The CHAIRMAN. How many employees do you have, Mr. Citron?

Mr. CITRON. About 300.

The CHAIRMAN. Congratulations.

Mr. CITRON. Thank you. We've added 200 in the last year, and we're about to add another 200 in the next 12 months, so we're real excited.

STATEMENT OF JEFFREY CITRON, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, VONAGE HOLDINGS CORPORATION

Mr. CITRON. Good morning, and thank you, Chairman McCain. Thank you, Senators. Thank you, Senator Lautenberg.

As Senator Lautenberg said, we are the leading provider of consumer and small business voice over IP services in the United States, with over 110,000 line equivalents in service already.

Vonage is at the forefront of this new emerging market, which has approximately 150,000 users. As such, we are also confronting public-policy issues that have never been seen before. Policymakers are asking: What is voice over IP? Is it like a phone, or is it more like an e-mail? Will it replace the traditional switched networks, or just be another option for consumers? How can public safety needs be met and improved upon? Indeed, voice over IP is turning the heads—turning telephony on its head as it blends voice and data into exciting new offerings.

In the face of such change and uncertainty, there is a tendency by some to try and wedge this new technology into existing telephone regulations. I urge you to resist this temptation and to keep this new innovative technology free from inappropriate regulation, enabling it to evolve and grow where the possibilities are really endless. We also recognize that there are a number of public-policy needs that have to be met. We believe that voice over IP providers and the government can work together to fulfill those needs.

For the first time, consumers are experiencing widespread residential local competition. Competition, in turn, lowers prices and improves offerings. Vonage offers customers the ability to replace their existing phone service for as little as \$14.99 per month. This also includes 500 minutes of calling, with the most popular features, like caller ID with name, call waiting, call forwarding, voicemail, and a host more, all included for free. At the same time, Vonage is meeting public policy goals today by supporting 911, 411, and local number portability.

And the good news doesn't stop there. Every day, people are upgrading their dial-up connections in order to get access to this new killer application that offers better value and new innovative features.

Now, as consumers are increasingly demanding these new services, the capital markets are finally taking notice. This has spurred investment capital to flow into new and exciting companies such as ours, which, in turn, has led to the creation of new jobs and has increased capital spending on telecom equipment.

But this resurgence is already in jeopardy. Under attack by disparate interests from the State of Minnesota to policymakers that just suggest Voice over IP must be subject to a full suite of regulations. Should you allow this type of improper regulation to take hold, the Voice over IP industry will greatly suffer.

Vonage has taken a leadership role in the area of social policy by becoming the first non-geographic-based voice over IP provider to adopt a 911 solution. But Vonage is not stopping there. Development is already underway with NENA to provide an advanced E-911 technical solution to the voice over IP industry. In the future, voice over IP will enable new IP-based I-911 systems that will allow for the transmission of medical data, patient history, and other valuable information to field personnel. While this might sound like a pipe-dream to many, these dreams are quickly becoming a reality.

This spring, Vonage released a new enhancement to our 911 system that will allow users to be notified, via e-mail or via message to their cell phone, when someone from their home dials 911 service.

In the area of economic policy, the universal service and intercarrier compensation systems are broken, and they have been for a very long time due to a myriad of reasons, none of which have anything to do with voice over IP. Vonage strongly urges Congress to take up comprehensive USF reform for the purpose of addressing the needs of broadband deployment and to institute an appropriate funding mechanism for it.

As for intercarrier compensation, this Congress already has recognized the differences between wireline and wireless carriers.

Vonage urges Congress to support comprehensive reform and put in place a national intercarrier compensation system ensuring fairness to all parties, including new entrants, like Vonage. While this work is underway, it would be reckless to subject voice over IP providers to a broken system.

In the area of law enforcement, Vonage has been and is fully committed to meeting the needs of law enforcement personnel. Vonage already has received numerous subpoenas for customer information from government agencies. And in every case, we have fully complied. Vonage is currently working with the FBI to explore a technical standard by which law enforcement personnel could intercept calls. If policymakers are concerned that CALEA may not apply to voice over IP, then we should address the deficiencies of CALEA in the statute.

As Congress considers voice over IP issues, we remind you that with Internet applications, whether they be voice over IP applications that send bits of sound from one destination to the other, or a Web browser program that sends bits of images and text back and forth, each bit of data deserves the same treatment regardless of the content it is carrying. Congress boldly exercised far-reaching leadership by promoting Internet developments, and now we need Congress to act again.

We urge you to keep two key principles in mind. First, voice over IP is an interstate service, like the Internet itself. And, second, voice over IP is an information service, not a telecommunications service.

I look forward to answering your questions, and I commend the Chairman for holding these hearings.

[The prepared statement of Mr. Citron follows:]

PREPARED STATEMENT OF JEFFREY CITRON, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, VONAGE HOLDINGS CORPORATION

I. Introduction

Good morning Chairman McCain, Ranking Member Hollings, and Members of the Committee, and thank you for inviting me to appear before you today. I am Jeffrey Citron, Chairman and CEO of Vonage, the leading voice over Internet protocol ("VoIP") provider in the United States.

I am honored to be here today. The United States Senate Commerce Committee has been at the center of the technological and telecommunications revolution that has swept the United States over the last decades. Now, we have reached a critical juncture with the emergence of new technologies, and it is imperative that Congress exercise its leadership to pave the way for these technologies before their progress is halted by impenetrable regulatory roadblocks. Going forward, the members of this Committee will play a key role in ensuring that the United States maintains its dominant position in the international technology community, and that every American is able to experience the communications advances that are being developed on what seems like a daily basis. As such, I sincerely value the opportunity to contribute to the debate about VoIP services.

Headquartered in New Jersey, Vonage uses a VoIP software solution to bring voice communications service to consumers nationwide. Vonage customers use a third-party provided broadband connection to make Internet calls, either to another user on the Internet, a traditional telephone, a wireless customer, or a user of another Internet protocol ("IP") network. Regardless of the type of call, a Vonage customer uses a computer and a broadband Internet connection. Through the use of special software and the Internet, Vonage provides its customers with a new communications tool that offers exciting new features and functionality at a significant cost savings to traditional telephone service. Further, because the Vonage service requires customers to use a broadband Internet connection, Vonage's VoIP service drives broadband adoption. For the first time, many of Vonage's customers now find

they have a reason to subscribe to high speed Internet service. Indeed, Internet telephony is stimulating the telecommunications and Internet industries, and the economy as a whole.

The consumer and investor response to our VoIP product has been remarkable. As recently as 2001, Vonage was in the research and development phase, and the company did not fully launch its service until 2003. Nevertheless, Vonage is already the clear Internet telephony industry leader, commanding over 63 percent of the market share with a national reach that accounts for more IP telephony lines than the entire North American cable industry combined. Early this month, Vonage announced that it had activated its 100,000th line—less than 5 months after having activated its 50,000th line. Vonage continues to add over 15,000 lines per month to its network and completes over 5 million calls per week.

While the response to our product is overwhelming, VoIP is still in its infancy, with only .1 percent of all U.S. telephony subscribers, according to Merrill Lynch. As the market and the technology develop, we encourage policy makers to resist wedging this promising new technology into rigid regulatory boxes that were created for legacy monopoly communication systems and markets. Vonage's form of VoIP is an "information service" like e-mail, and rides over the Internet, which is inherently interstate and incongruous with artificial boundaries.

We understand that critical public policy needs must be met in the context of VoIP, and we commit to working with policy makers on issues such as 911 emergency calling, law enforcement interception, disability access, and the provision of universal service. Meeting these needs, however, does not require that VoIP be regulated under a system of rules created decades ago, intended to govern the conduct of wireline carriers.

Failing to apply new thinking to this new technology carries serious consequences. VoIP providers would have to divert their energies to complying with a patchwork of 51 sets of regulations of questionable merit to this new technology. Compliance would not only be difficult, but in many cases impossible. The result of misguided state efforts to regulate new Internet applications is draining resources away from deployment and innovation, thereby softening the market. Already, Americans are missing out on the benefits of competition and advanced functionality that citizens of Japan and China readily enjoy. Americans are losing out on broadband adoption and the economic benefits it brings. On a broader level, the failure by the United States to capitalize on this opportunity is retarding further innovation, driving VoIP providers off-shore, and contributing to the exportation of technology, jobs, and the tax base. American technological competitiveness is suffering, and we are already lagging behind many countries in Asia and Europe in broadband deployment and VoIP offerings.

Congress and this Committee have exercised visionary leadership with respect to the Internet by codifying in the Telecommunications Act of 1996 a policy of exempting "information services" and thereby the Internet from common carrier regulation. That critical step put this Nation on a path toward great advances in Internet technology, and ultimately to the creation of VoIP. We now look to Congress to continue its bold leadership, for a step back would have catastrophic consequences. Time is of the essence, as states have already begun the process of applying antiquated rules to this promising new technology. On the Federal level, the Federal Communications Commission ("FCC") appears to be headed in the right direction, but will need your support and guidance as it struggles to ensure that these new technologies flourish while at the same time meeting important public policy goals. We are relying on Congress to reject ill-fitting regulatory models and focus on principles that value consumer benefits, innovation, and economic development.

II. VoIP Creates Consumer and Economic Benefits

VoIP technology furthers a number of national policy goals. It provides consumer benefits such as lower prices, innovative features, and competition. Vonage's VoIP service, and similar VoIP services, drive broadband adoption, as high speed access is a prerequisite for using the services. Further, this new technology stimulates economic development and American competitiveness.

VoIP Technology. Vonage's service is a software application, independent of the underlying transmission facilities that carry the calls to the Internet. Vonage's VoIP service converts analog voice transmissions into digitized data packets and transmits these packets over either the public Internet or managed IP networks. These data packets are routed using Internet protocol, which is the world's most common method for sending data from one computer to another.

Vonage's Product. The Vonage service operates using a VoIP platform to transmit voice over the public Internet. Vonage customers place calls using computer equipment that is connected to the user's high-speed wireline, cable, or fiber-to-the-home

connections, Wi-Fi network, and eventually new networks that have not yet been built. The digital signal is sent over the public Internet, then in some cases, back through a traditional phone network to the receiving party's phone. In order to permit Vonage's end users to communicate with end users on the traditional public switched telephone network ("PSTN"), Vonage had to make our service reverse-compatible with today's technologies. However, our product is also forward compatible; if the receiving party also is a Vonage customer, the call is transmitted wholly across the Internet, never touching the traditional phone network. Forward-compatibility also enables us to terminate calls to wireless phones and other IP networks without ever touching the PSTN.

In some cases, Vonage customers utilize a software program loaded on their computers to make a call. In other instances, the customer will use the special computer adapter. When using the special adapter, the broadband Internet connection is bridged to an ordinary phone essentially serving the same function as a microphone and headset when attached to a computer. In the near future, because Vonage provides a software application similar to instant messaging or e-mail, Vonage customers will be able to use a Wi-Fi cordless handset or even personal digital assistants ("PDAs") or other Internet-enabled device loaded with special "softphone" software.

Consumers Get More for Less. Through innovative software and hardware, Vonage provides its customers with increased functionality and significant cost savings. For example, the Vonage service package includes voice-mail, caller ID, call waiting, call forwarding, call transfer, 3-way calling, repeat dialing, call return, caller ID block, and call hunt for no extra charge. Vonage customers experience such enhanced functionality as local number portability, area code selection, the ability to use multiple phone numbers, web based voice-mail retrieval, national number mobility, and online features management. For this multitude of services, Vonage offers customers flat rate billing options that range from \$14.99 per month for 500 minutes anywhere in the United States and Canada to \$34.99 for unlimited local and long distance calling in those areas.

Competition. Congress has made it a national priority to encourage telecommunications competition. While great strides have been made by traditional telecommunications providers in the competitive business and long distance markets, there has been no meaningful competition in the local residential market. VoIP providers are accelerating competition in this area, realizing technological advancements and lowering consumer costs, all of which are goals Congress sought to achieve with the 1996 Telecommunications Act.

Even within the VoIP market, companies have implemented a variety of consumer offerings that generally fall under the "VoIP" banner, two of which are consumer applications: computer-to-computer and computer-to-phone. Using computer-to-computer products, the call dialing and receiving party both must possess special premises equipment that differs from an ordinary analog telephone. Vonage customers can talk computer-to-computer, and Vonage's service is also capable of reverse-compatibility with the legacy phone system by performing the net protocol conversion necessary to allow customers on the Internet to communicate with customers on traditional switched networks and vice versa, largely known as computer-to-phone VoIP. Additionally, Vonage users are able to communicate with many other kinds of networks, such as wireless networks and IP networks. In short, Vonage both enables reverse-compatibility with existing services while readying consumers for the technologies and functionalities of the future, when all networks will be IP based.

Broadband Deployment. While an estimated 85 percent of U.S. homes currently are capable of receiving broadband Internet access, only about 20 percent of all U.S. homes (23 million total broadband subscribers) have adopted the technology. These numbers pale in comparison to countries such as Korea and Canada. Those countries had broadband penetration levels at almost twice that of the United States. Also impressive is the development of broadband services in Japan. In 2001, there were less than 10,000 digital subscriber line ("DSL") broadband customers in the entire country. In just three years, the broadband market has swelled to over 10 million customers.

Because VoIP services require a broadband connection to achieve the necessary speed and "always on" functionality, VoIP provides consumers with the incentive to upgrade to these broadband networks. In fact, many Vonage customers upgrade to broadband simply to use our service. Often these customers find that they can receive the additional benefits of Vonage's service *and* high speed broadband for less money than it typically costs to purchase a traditional telephone service and narrowband Internet access. VoIP penetration drives broadband adoption, which in turn promotes broadband deployment.

American Competitiveness. Investment in the technology sector will drive innovation and help America reinforce its role as the world technology leader. This role is at stake given that broadband deployment has lagged in this country, and VoIP adoption in other countries has already surpassed the U.S. That growth has been attributed, in no small part, to the Internet telephony services that some Japanese broadband providers offer, like Yahoo! BB, which already has 3 million VoIP users. The only way America can maintain its position as the world's technology leader is to foster the growth of new technologies like VoIP.

Economic Benefits. VoIP can spur a telecommunications industry rebound and contribute to the national economic recovery. The telecommunications industry, which once helped drive the technology boom of the mid-to-late nineties, has been hard hit by the Nation's economic slump. Merrill Lynch estimates the S&P integrated telecom index fell about 64 percent from January 2000 to January 2004, while the broader market fell only about 24 percent. According to a 2004 VentureOne report, investment levels in the communications sector are down to 1996 levels.

Internet telephony can help revive the telecommunications, technology, and equipment sectors and the economy in general. Excitement surrounding VoIP services has already increased investment. A VentureOne report stated that IT investments increased to \$2.3 billion last quarter, up from \$2.1 billion in the third quarter. That increase, which was the first time IT funding had demonstrated sequential growth since 2000, was due in part to several large investments in VoIP providers. Further, several VoIP equipment manufacturers, such as Sonus, Cisco, Lucent, and Motorola posted large stock price gains for 2003, partially due to increasing interest in VoIP equipment and services.

III. Congress Should Continue its Policy of Allowing "Information Services" to Grow Unfettered by Regulation

In an effort to stimulate innovation and competition in the Internet sector, Congress and the FCC have long respected policies that differentiate "information services" from regulated telecommunications services. While Internet telephony may, in some respects, resemble traditional telephony from a consumer perspective, from a technical and regulatory perspective, Vonage provides an "information service."

Federal Precedent. Federal policy has long differentiated "telecommunications services" and "information services." The FCC distinguished between "basic services" and "enhanced services" as far back as 1980 in the FCC's *Second Computer Inquiry*, 77 FCC 2d 384 (*Computer II*). Basic services are essentially telecommunications common carrier services that are regulated under Title II of the Communications Act of 1934. The FCC concluded that regulation of enhanced services is unwarranted because the market for those services is competitive and consumers benefit from that competition. *Id.* at 433. The FCC acknowledged that notwithstanding this decision, there is a communications component in some enhanced services. *Id.* at 435. The FCC reaffirmed the distinction between basic and enhanced services in its *Computer III* proceeding in 1986. *Third Computer Inquiry*, 104 FCC 2d 958 (*Computer III*).

Congress Codifies Distinction. The Telecommunications Act of 1996 mirrors this distinction with its definitions of "telecommunications service" and "information service." The 1996 Act defines "telecommunications service" as "the offering of telecommunications for a fee directly to the public or to such classes of users as to be effectively available directly to the public regardless of the facilities used." 47 USC 153(46). The Act defines "telecommunications" as "transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 USC 153(43). By contrast, the 1996 Act defines "information service" as "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service." 47 USC 153(20).

By codifying these definitions, Congress set out a policy of separating regulated common carrier services from Internet services to encourage innovation and competition. Congress found that "[t]he Internet and other interactive computer services have flourished, to the benefit of all Americans, with a minimum of government regulation." 47 USC 230(a)(4). In order "to promote th[is] continued development," the 1996 Act reaffirmed the "policy of the United States" of maintaining the Internet "unfettered by Federal or State regulation." 47 USC 230(b).

"Information Services." By these definitions, VoIP is an information service, and not a telecommunications service. VoIP is a software application that rides on

broadband Internet networks. VoIP service offers the “capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.” 47 USC 153(20).

Policy Has Worked. The government’s policy of encouraging innovation through a regulatory safe harbor sparked unimagined innovation in Internet development, and led to the development of VoIP. For years, VoIP services were more theory than reality, and were largely ignored by policy makers. The neglect proved positive as entrepreneurs and inventors saw an open playing field and were provided incentive to create. VoIP is rapidly growing, and should be allowed to continue, without the trappings of common carrier regulation. Now, as VoIP is gaining consumer acceptance, policy makers have announced an intention to explore and even regulate the service, but this would be a mistake. As I have noted, VoIP still only accounts for .1 percent of U.S. telephony subscribers. The technology is in its infancy, and should be allowed to grow consistent with the policy that led to its inception.

To that end, policy makers should clarify the existing statutory framework to ensure that it continues to reward innovation, foster consumer benefits, and facilitate broadband deployment and the growth of the Internet. In this respect, it is imperative to make clear that VoIP services such as Vonage’s are not telecommunications services, but rather are interstate information services.

IV. There are Serious Risks to Prematurely Regulating VoIP

Regulating VoIP prematurely could threaten the consumer and economic benefits that have already resulted from this nascent technology. While the technology is beginning to reach the mass market, it is still evolving, and it is too early to know what regulations, if any, are necessary. What is known, however, are the risks of regulation.

Patchwork of State Regulation. Failure to establish a Federal policy protecting the growth of VoIP could result in a patchwork of premature, burdensome state legislation and regulations, crippling the domestic VoIP industry. Overregulation, particularly differing regulations in all 50 states and the District of Columbia, will make it impossible for VoIP to grow. Newer companies like Vonage do not have the resources to participate in proceedings at every state utility commission, nor to comply with 51 sets of differing regulations that may each have the same goal, but may require us to comply in different ways. The Internet, by its very nature is an interstate service, incapable of being divided into artificial boundaries. Policy makers should recognize this inherent feature of the Internet when formulating policy and applying such policy to applications riding over the Internet.

Vonage’s Experience. Vonage experienced first hand the strain that burdensome state regulations can place on a nascent technology company. The Minnesota Public Utilities Commission (“PUC”) last year asked Vonage to obtain a certificate of authority to provide a telephone service. Vonage had less than 500 customers in Minnesota, yet was forced to vigorously oppose the Minnesota PUC to avoid the establishment of an improper state level precedent. Vonage argued, in general, that its VoIP service was an interstate “information service” pursuant to the Communications Act, and thus not subject to Minnesota PUC regulation.

The United States Federal District Court for the District of Minnesota ruled in Vonage’s favor on October 14, 2003. While Vonage was pleased with the decision, successfully fighting the case was a serious drain on Vonage’s resources, and continues to be burdensome. The Minnesota PUC is currently appealing the case for a second time, forcing Vonage to use valuable human and financial resources to fight court battles, directing these resources away from service enhancements and innovations, including technical solutions to meeting public policy goals. Vonage simply could not afford to duplicate this effort in 49 states and the District of Columbia. We would be driven out of business.

A few states have expressly declined to regulate VoIP. In 2003, the Florida state legislature mandated that VoIP services should remain free from unnecessary regulations, and we commend them for setting an early example before the current regulatory push. The Colorado PUC also found that imposing common carrier regulation on VoIP services would be unnecessary. Numerous other states, however, including New York, Ohio, Utah, Missouri, Pennsylvania, Illinois, and Wisconsin, continue to explore the possible application of common carrier regulations to VoIP providers. The march toward regulation continues: the California PUC last week tentatively concluded that VoIP services that enable communications with the traditional phone network are public utilities and subject to its jurisdiction.

We hope that Federal policy makers will take action to make clear to states that VoIP is an interstate information service, thereby halting the march of the states to regulate it.

National Policy Issues. With resources stretched thin for VoIP providers, overregulation by the states or the Federal government would slow technological development. With the uncertainty that is created by this regulatory hodgepodge, capital will dry up. If the U.S. becomes a hostile environment for VoIP, domestic innovation will slow, risking this Nation's role as a technology leader. Furthermore, since VoIP services are provided over the Internet, they can be launched from anywhere on the globe. Providers like Skype are already offering services from off-shore locations. Not only would it be a loss of this Nation's technology base, once providers move off-shore, the U.S. would have no access to the services and thus face difficulties meeting public policy goals such as 911 service, universal service, or law enforcement intercepts for these off-shore services. The U.S. would also lose an important tax base, and would see a further exportation of service jobs.

V. VoIP Providers Can Meet Public Policy Goals

While policy makers are rightfully concerned about how VoIP fits in with public policy goals, VoIP can assist in meeting these aims, and in some cases it even holds more promise than legacy systems. VoIP will, of course, have to meet public policy goals in ways that are technically feasible for its technology, and government should help facilitate such growth through an understanding of the capabilities and limitations of the technology.

The issues public policy makers most often identify as areas of concern are compliance with emergency 911 capability, disability access, universal service, law enforcement access to call intercepts, and intercarrier compensation. However, public policy goals can be and are being met without classifying VoIP as a telecommunications common carrier service.

911 Dialing. The ability to access emergency services through dialing 911 is an important feature for consumers of telephony, whether it is plain old telephone service, wireless service, or VoIP service. VoIP service offers the promise of truly exciting functionality in this area. While we are building solutions now, ultimately VoIP will offer consumers and emergency workers more functionality than the services of today. For example, VoIP customers in the future might be able to access 911 services through any Internet-equipped device, such as a Blackberry, PDA or instant messaging product. In addition to the customer's precise location, emergency workers may be able to instantly and seamlessly access that customer's medical history, while at the same time a separate message could notify the customer's primary physician or family members of the emergency situation.

Vonage is the VoIP industry leader in providing a 911 solution to its customers. Similar to traditional telephone service, Vonage customers who dial "9-1-1" on their handsets have their calls forwarded to the Public Safety Answering Point ("PSAP") for that customer's designated area. There are, however, several technology issues that currently cause the Vonage solution to differ in certain respects from traditional 911 service.

First, similar to cellular providers, the mobility of the Vonage service prevents it from being able to identify the actual geographic location of customers that place a call using the Vonage software. Thus, Vonage requires customers to register their location before they are able to use the 911 service, and then routes any 911 calls to the PSAP serving that location. Because of the mobility of VoIP customers, the industry will have to develop special technology solutions to provide enhanced location information to PSAPs. This will require systems upgrades not only by VoIP providers, but also by incumbent local exchange carriers ("LECs") and PSAPs.

Second, in order to route 911 calls to a PSAP's dedicated 911 lines, Vonage must obtain interconnection to the incumbent LECs. While some incumbents are cooperating with Vonage and local PSAPs, others are refusing to work with Vonage and local PSAP administrators to foster interconnection arrangements or technical trials. The reaction has been mixed, to say the least. We have had serious problems with Qwest in Minnesota in this regard, but Qwest in Washington state has been very cooperative. So even with the same LEC, there are inconsistencies. Indeed, despite direct intervention from the PSAP administrator in Minnesota, Vonage has been unable to obtain E911 trunk interconnection, and has been forced instead to route Vonage customers' 911 calls to the PSAP's administration number. SBC in Texas has been very helpful, and we commend them for that and look forward to continuing that productive relationship. In this area, it would be helpful for Congress to encourage the LECs to provide such assistance as access to trunk interconnection so we can fulfill our commitment to offering wireline-comparable 911 services.

Vonage makes the limitations inherent in its 911 service clear to all Vonage customers and is continually working to remedy these issues. Vonage is working with the National Emergency Number Association ("NENA"), which recently adopted a

joint resolution with the VoIP industry, to develop technical solutions for VoIP 911, and we are regular participants in the NENA working group. Vonage independently is working with the PSAPs in Minnesota, Texas, Washington, and Vermont. We are participating in the FCC's March 18, 2004, Internet Policy Working Group "Solutions Summit" on 911/E911 issues associated with Internet-based communications services. Further, Vonage is working to upgrade its 911 service and negotiating with competitive LECs to obtain indirect access to the E911 trunks.

Vonage is confident that it will be able to offer a 911 solution to its customers in the near future that is comparable to that offered by traditional telecommunications providers. All of this is being done despite the fact that VoIP is not classified as a common carrier service nor required to provide these offerings.

Disability Access. Individuals who have disabilities should have full access to the range of developing technologies. While VoIP technology and deployment are in the early stages, VoIP providers anticipate software solutions to disability-related obstacles to service. Given the flexibility of software solutions, we anticipate that VoIP providers will ultimately be able to offer greater functionality than the traditional legacy systems.

Universal Service. Congress has expressed its commitment to ensuring that rural and underserved areas receive telecommunications services equivalent to those found in more high-density or well-funded locations through the Universal Service Fund ("USF"). In this context, Congress is contemplating USF reforms and may consider the role of VoIP services as part of that exercise. While it has been suggested that VoIP is a threat to the fund and therefore VoIP services must be regulated as telecommunications services, in fact the existing system is "failing" for a number of reasons and VoIP does not need to be regulated as a common carrier service in order to make direct contributions to USF.

The FCC has opened a rulemaking in which it is examining ways to ensure that USF support remains sustainable. As part of that proceeding, it has recognized that numerous factors are contributing to the decline in monies paid into the USF, and the emergence of VoIP services is only one small piece of that puzzle. For example, the decline in long distance rates, the proliferation of flat-rated calling plans and bundled service packages, and the substitution of wireless, e-mail, instant messaging, and other services for traditional long distance calling have all reduced monies flowing into USF.

VoIP providers can and do pay into the fund as end users, and there is flexibility under current law to accommodate VoIP services in relation to USF. Even if policy-makers determine that VoIP providers should contribute directly to USF, such a result could be achieved under existing law. The FCC has broad statutory authority to modify the current contribution metrics without engaging in any perversion of the dichotomy between information and telecommunications services. FCC Chairman Powell testified before this Committee on October 30, 2003, that the FCC has "legal authority to assess Universal Service contributions against information service providers that use telecom." Under current law, VoIP providers offer information services, but they use some underlying telecommunications services. VoIP providers need not be regulated as carriers to be required to contribute to universal service.

Unfortunately, the USF distributions currently are weighted heavily towards the support of legacy narrowband networks, which are not capable of supporting broadband Internet access services or the modern applications that run on these broadband networks. This continued support of legacy networks at the expense of the deployment of modern broadband networks and applications will only serve to further distance the United States from the rest of the world leaders in terms of broadband adoption and the development of modern applications, such as VoIP. Therefore, Vonage believes it is important that any USF reform efforts should consider policies that encourage construction of broadband-capable networks in high cost areas.

Law Enforcement Intercepts. Without exception, Vonage has complied with all subpoena requests from law enforcement, including providing call logs, records, and other detailed account information. In the future, Vonage software will also allow law enforcement intercept capabilities. Vonage is committed to assisting law enforcement and will comply with VoIP requirements determined by policy makers. The FCC has announced its intention to open a proceeding to consider the interaction between CALEA and VoIP. Vonage looks forward to participating in that proceeding, and in working toward a technical solution wherein VoIP providers can continue to assist law enforcement in their surveillance efforts. It is not necessary, however, to classify VoIP as telecommunications services in order to meet law enforcement needs.

Intercarrier compensation. Intercarrier compensation has been included in the panoply of issues that policy makers are considering as they evaluate the impact

of VoIP services on the market and on public policy. Vonage does not connect directly to the phone network, but rather contracts with carriers to transport its calls to their destination on the public switched network. Vonage has not thus far participated in proceedings related to VoIP access charges (computer-to-computer calls are subject to Internet industry voluntary peering arrangements for termination to other computer users). Nonetheless, Vonage recognizes, as many policy makers do, that the access charge system is broken and in need of repair. However, Vonage emphasizes that VoIP is not the source of the access system's ills; these problems have myriad causes and predated the emergence of VoIP by several years. VoIP consumer products, such as Vonage's service, will not have an impact on access charges for a long while to come, as we represent only .1 percent of telephony subscribers.

The existing system of intercarrier compensation is complex, imposing unique charges on each different type of carrier and each different type of service. The FCC has recognized that these disparities are unsustainable in a converging and increasingly competitive market and has been examining intercarrier compensation reform for almost three years. Vonage urges Congress to support the FCC's efforts to reform this broken system.

In Section 254(e) of the Telecommunications Act of 1996, Congress required the FCC to make the implicit subsidies in the access charge regime explicit, and the monies to be collected in the Universal Service Fund. The FCC has begun the process of making interstate USF support explicit and reducing subsidies implicit in interstate access charges. We are hopeful that the FCC will finish these reforms as quickly as possible and that the states will also take up this important matter and remove implicit subsidies and rationalize their intercarrier compensation systems as well.

Removing implicit subsidies from the system of access charges and imposing a single cost-based termination charge on all types of providers and traffic should end any alleged arbitrage opportunities and bring rationality to the system.

VI. Recommendations

As Congress contemplates the role of VoIP as a provider of consumer voice services, we offer our perspective on what policies would help VoIP to grow. First, Congress should make clear that VoIP is an interstate service, like the Internet itself. Doing so will bring regulatory clarity, which will stimulate investment and promote further consumer benefits. Second, Congress should reaffirm that VoIP services such as Vonage's are "information services," and therefore VoIP providers such as Vonage are information service providers. Public policy needs can be met without regulating communications over the Internet as if they were being provided by a telecommunications carrier.

We look forward to working with Congress during this exciting time. We hope that Congress will continue its historic support for Internet based technology, by allowing the sector to grow unfettered by ill-fitting regulations that were designed for legacy systems. Any less would imperil VoIP carriers like Vonage in the face of what will soon become overwhelming regulation. VoIP providers have something valuable to offer to consumers, but we can only move forward by focusing our limited resources on improving our service, growing, and meeting critical public policy mandates like those this Committee is considering.

I look forward to answering any questions you might have.

The CHAIRMAN. Thank you very much.
Mr. Wise, welcome.

STATEMENT OF HON. STAN WISE, COMMISSIONER, GEORGIA PUBLIC SERVICE COMMISSION AND PRESIDENT, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS (NARUC)

Mr. WISE. Thank you, Senator. Thank you, Members of the Committee, for this opportunity.

I am a Commissioner from the State of Georgia. I've served in my current capacity as a Commissioner from Georgia for just a little over 9 years. I also currently serve as the President of NARUC, representing an association of state commissions that has been active since 1889.

State commissions want VoIP to succeed. Our constituents want VoIP to succeed, and we want them to have it. Georgia's been innovative in our decisions and choices of VoIP service, and we are richer for it. We agree with many of the folks that have testified here today that this is an incredible new technology, and worthy of this Senate's review.

State commissions have applied a lighter touch. We have a number of states that have opened dockets simply to gather information. Two states have, in fact, gone ahead and opened dockets and asked VoIP carriers to certify. That was Minnesota and California. Time Warner has filed for certification in five states, at least as far as we know at this point. So certainly any method and any message that state commissions would generate at this point would be for that light touch.

Customer expectations on VoIP has been one that they've seen hot technologies come and go in the last few years, and not that this is one, but certainly it is one that is worthy of everything and all the resources that we have to offer at this point. But if it's going to replace the phone in your house, then it does have more serious implications, and we're pleased that industry is working on solutions—on public interest, 911, consumer protection, and advanced notice before termination—but they are still too serious of issues to remain voluntary.

We, in our roles as regulators, have found that—in USF or any of these other issues, that we must protect our rural carriers and their customers and other USF beneficiaries. Making VoIP an information service would take it off the books for USF and other access charges. This is certainly one of the reasons that the FCC should address these issues first and quickly.

We are not interested in seeing additional taxes in the telecommunications industry. Certainly, we believe that this body is very capable of determining what it a tax-on-tax situation and what should be telecom, and what isn't. Our initial concern with doing telecom as an Internet tax bill has continued to be addressed by this body.

In the long term, states are concerned that the FCC will engage in a *de facto* tax policy in a telecom rulemaking, costing states up to \$13 billion. We would hope, and we continue to see the consensus at NARUC, that public-service obligations come from the functional nature of the service, and not the technology used to deliver it. We continue to be concerned about these consumer issues on the disabled and on 911.

State commissions are intimately familiar with the local markets. I call it the government at the lowest common denominator. And as much as the connotations of regulators can mean, we're that first line when people are unhappy with their service, with slamming, with billing, cramming, with their just customer service choices. And so we will continue to be diligent on that. We will hear from the consumers before many other government entities and sometimes even the carriers that we regulate.

We must provide state universal service funds with programs to fill in the gaps missed by Federal programs. We will continue to be responsible—to be responsive and responsible to consumers in ways that remain closest to the customers.

Thank you very much.
[The prepared statement of Mr. Wise follows:]

PREPARED STATEMENT OF HON. STAN WISE, COMMISSIONER, GEORGIA PUBLIC SERVICE COMMISSION; AND PRESIDENT, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS ("NARUC")

Mr. Chairman and members of the Committee, I am Stan Wise, Commissioner with the Georgia Public Service Commission and President of the National Association of Regulatory Utility Commissioners (NARUC). Thank you for providing me the opportunity to testify today on behalf of NARUC.

Founded in 1889, NARUC represents the interests of State utility commissions operating in each of your home States. NARUC's member commissions are responsible for implementing: (1) State telecommunications laws; and (2) Federal statutory provisions specifying incumbent local exchange company obligations to interconnect and provide nondiscriminatory access to competitors. *See*, 47 U.S.C. §252 (1996).

NARUC has approved two resolutions relating to voice-over-Internet-Protocol technologies, both of which are attached to this testimony.

State commissions want VoIP and other technologies to succeed

NARUC's members are committed to making sure consumers in every one of our States can realize the benefits of exciting new technologies like voice-over-Internet-Protocol ("VoIP") in the context of a telecommunications market that continues to live up to the demands that we as a society place on it.

My own state of Georgia is home to innovative companies like ARRIS Corporation, which makes VoIP networking equipment, and trial projects by Z-Tel Communications, Charter, and CableCom. Georgia has a vibrant and growing technology industry and we thrilled to play host to such groundbreaking offerings.

State Commissions Have Applied A Light Touch

Just like Federal policymakers, State commissions are investing substantial effort to understand the unique business models, services and consumer opportunities that have sprung up around VoIP technology.

Numerous States have opened dockets or informal investigations to gather all the facts before deciding how to proceed. A few States have asked VoIP carriers to certify as telecommunications service providers, leading in at least one case to litigation over whether such services is actually an information service or can be certificated under State law as a telecommunications service. Significantly, that Minnesota case was opened as a result of a complaint that the relevant carrier was not complying with State emergency calling laws.

At the same time, Time Warner Cable has chosen to file for certification as a telecommunications carrier in at least five States and provide 911 emergency dialing, pay access charges and remit universal service fees. In all States where the issue has arisen or been investigated, State commissions have applied either a light regulatory touch or, to date, no touch at all. Current VoIP providers do not have market power nor do they control essential bottleneck facilities. Like any other new entrant, they are not generally subject to economic regulation or extensive oversight by State commissions.

Consumer Expectations And The Phone System

Consumers have certain expectations of today's phone system, including ubiquitous, reliable service, a minimum level of service quality, advance notice before termination and important features like E911. Disabled individuals want to participate in the same communications system as the rest of us. Law enforcement needs fair but effective access to communications to track down criminals and terrorists.

The most important and challenging fact about VoIP is that, if industry predictions are correct, it could replace a substantial part of the current telecommunications market over the next couple years.

Today, consumers who use a "pure VoIP" product like Free World Dialup or "Skype" are likely to have a "plain old" telephone on the same desk as the computer and whatever VoIP hardware they are using. If they need to dial 911, call a relative or even order a pizza, the current system is there for them.

But with big players like SBC, Time Warner and AT&T entering the market, the stakes are raised because many households will reach a situation where the VoIP phone (or computer or whatever you want to call it) is the only phone in the house. Eventually, non-technophiles will come to rely on VoIP phones they way they rely on the current system today.

Whether we realize it or not, we build our lives around a reliable telephone system. If a babysitter, God forbid, has to call 911, she'll need a reliable dial tone, clear service and effective routing to the nearest public safety answering point, and the local ambulance dispatcher will want to know where she is, even if she can't give the directions. While policymakers are notoriously bad at predicting the "next big thing," I am certain consumers will continue to expect many of the same things from the phone system of the future, regardless of which technology it uses.

The good news is that industry groups are stepping up to the plate and beginning to work on their own emergency dialing and disabled access solutions and actively engaging in discussions about how to sustain the universal service system and reform intercarrier compensation.

We are happy they are engaging in these activities so they can meet their public service obligations in the most efficient, effective manner possible. None of us intends to apply old rules to new technologies in ways that don't make sense, but the public interest obligations of the telecom system are serious enough to require continued governmental oversight and, when necessary, enforcement.

Inter-carrier Compensation, Universal Service And Taxes

In the near term, State commissioners plan to play a pivotal role in ongoing dialogues about how to reform intercarrier compensation and universal service. In carrying out the Telecommunication Act's mandate to make all subsidies "explicit," the Federal Universal Service Fund is facing growing demands.

The FCC has opened a broad proceeding on VoIP technologies. No matter what you believe the end game should be, there are undoubtedly a host of critical issues raised by that proceeding. However, the FCC rules or, alternatively, Congress acts, knotty issues, transition and otherwise, that require resolution before moving forward, are outstanding. Our November resolution lists a few of the concerns that would apply if VoIP services were classified as Title I:

- Additional uncertainty and reduced capital investment while the scope of the FCC's authority under Title I is tested in the courts;
- Loss of consumer protections applicable to telecommunications services under Title II;
- Further disruption of traditional balance between Federal and State jurisdictional cost separations and the possibility of unintended consequences and increased uncertainty;
- Increase risk to public safety;
- Loss of state and local authority over emergency dialing services; and
- Reduced support base for Federal and State universal service as well as State and local fees and taxes.

How VoIP services are ultimately defined, as well as the FCC's reformation of the Federal intercarrier compensation regime, will also have obvious effects on intra-state intercarrier compensation schemes and possibly funding for State universal service programs.

Many states also operate their own universal service programs, filling in the gaps missed by the Federal system for thousands of high cost and low-income consumers. Any comprehensive solution—on VoIP or intercarrier compensation—must allow States to preserve these programs.

Most policymakers agree that Federal and State universal service and intercarrier compensation regimes are inextricably linked to policy choices adopted for certain types of VoIP services. Those choices could also impact service quality and reliability as well as impact existing mechanisms for constituent/consumer dispute resolution concerning issues like "slamming" and "cramming." At a minimum, before either Congress or the FCC takes precipitous action defining the policy that applies to VoIP and other telecommunications, those issues must be addressed. Actions that increase incentives for regulatory arbitrage *before* taking care of rural America and low-income consumers or fully exploring the impact on a range of related issues will make the task of transitioning to these new services exponentially more difficult.

Moreover, the same issues of traffic migration that bedevil the intercarrier compensation system and the universal service fund will begin to inflict a major financial hit on state budgets, up to \$13 billion, if the VoIP services that terminate to the Public Switched Telephone Network (PSTN) are classified as "information services" and removed from State taxing jurisdiction. This raises the stakes for whatever decision the FCC or Congress ultimately makes.

Principles Moving Forward: Functional Nature Of The Service

If there is one thing we can be sure of, it is that the technology itself will continue to evolve and change as quickly as the ink dries on legislation. Not even the industry leaders here on this panel can tell you what the technology will look like several years from now. Although the technology has been around for a while, as far as I can tell, the current “VoIP boom” began scarcely five or six months ago, so many more twists and turns are sure to come.

The technology used to deliver voice communications has been in constant flux ever since Alexander Graham Bell patented the first telephone. Policies that focus on specific technologies risk policy-makers, rather than markets, deciding which competitors should win or lose. The consensus among State commissioners, as indicated by our resolutions, is that public interest obligations of a service derive from the functional nature of that service—not from the technology used to deliver it.

- If a service originates and terminates on the PSTN, it is a telecommunications service.
- If a company controls bottleneck facilities for basic telecommunications services, neither VoIP nor any other technology should shield it from oversight.
- If babysitters and grandmothers rely on a service for voice communications, it should be reliable, should connect you to emergency dialing services and should be available to the disabled.
- Nor should constituents be forced to choose between cutting any phone service and paying a specious charge “crammed” on their bill by a third party vendor.

If we don’t expect these things from our phone service, we should have a genuine debate about that—for all phone service—as I expect this body will over the next several years. Far from slowing down new technologies with old rules, this approach actually frees us to be clear about the public interest obligations we expect from telecom services without creating market distortions or opportunities for regulatory arbitrage.

VoIP is the hot technology of today, but members of this committee know that “hot technologies” come and go. Some change the world and others disappear leaving only their press releases. The public interest obligations of the telecom system should be built around the consumer and the role that a particular service plays in his life.

THE ROLE OF THE STATES

State commissions will continue to play a valuable role in maintaining a telecom system that is reliable, dependable and available at comparable prices in every region of the country. Each of us is intimately familiar with the telecom markets in our own States and in a position to be responsive to local consumers in ways that simply can’t be done from Washington. We maintain State universal service programs, mediate competitor-incumbent interconnection agreements, monitor the level of competition in individual markets, and, significantly respond and resolve your constituent’s complaints about service.

I know that Vonage, TimeWarner, CenturyTel and lots of others are working day and night to do amazing things for consumers and address the public interest concerns I’ve raised today. State commissioners applaud the IP communications industry for its dynamism and we have no intention of standing in the way of progress. Instead, we look forward to working closely with industry on those public interest issues over the coming months and years as the innovation that makes this Nation great inevitably reshapes our telecom system along with the rest of the economy.

RESOLUTION RELATING TO VOICE OVER THE INTERNET TELECOMMUNICATIONS

WHEREAS, The Internet is providing opportunities for new methods to originate, transport, and terminate telecommunications, but is also providing new regulatory challenges, and

WHEREAS, AT&T Corp has filed a petition with the Federal Communications Commission requesting in part that the FCC prevent local exchange carriers from assessing interstate access charges on certain phone-to-phone Voice Over Internet Protocol services, pending adoption of final Federal rules, and

WHEREAS, In 1998 the FCC reached a tentative conclusion that certain phone-to-phone IP calls may be telecommunications services, even if the carrier converts such a call to IP format and back again, and that a user who receives only voice

transmission without other enhancements is receiving a telecommunications service, not an information service, and

WHEREAS, A decision by the FCC, in this docket or elsewhere, to declare all phone-to-phone calls over IP networks to be information services by virtue of the technology could have negative effects on various telecommunications policies, including universal service, and might be inconsistent with the 1996 Act, and

WHEREAS, Voice over the Internet Protocol and intercarrier compensation issues are inextricably linked, and

WHEREAS, A significant portion of the Nation's total voice traffic could be transported on IP networks within a few years, now therefore be it

RESOLVED, By the Board of Directors of the National Association of Regulatory Utility Commissioners, convened in its February, 2003 Winter Meeting in Washington, D.C., that the FCC should confirm its tentative decision that certain phone-to-phone calls over IP networks are telecommunications services, and be it further

RESOLVED, That NARUC asks the 706 Joint Conference to systematically address issues relating to Voice Over the Internet Protocol and to explore, with the States and the appropriate joint boards, and with industry, mutually satisfactory methods of dealing with the related jurisdictional rate and separations issues, including but not limited to reviewing, revising and simplifying the varied existing intercarrier compensation regimes while preserving universal service, and be it further

RESOLVED, That NARUC's General Counsel should file with the FCC comments and ex parte presentations consistent with this resolution.

Sponsored by the Committee on Telecommunications
Adopted by the NARUC Board of Directors February 26, 2003

RESOLUTION ON INFORMATION SERVICES

WHEREAS, Communications consumers are served by an increasing number of technologies in today's markets and these technologies will continue to evolve and develop in the future; *and*

WHEREAS, The existing legal and regulatory constructs evolved in markets where almost all consumers were served by the public switched network and that new constructs will need to evolve and develop; *and*

WHEREAS, These FCC decisions and proceedings have or may assert jurisdiction under Title I over new technologies but without acknowledging that those technologies utilize and include telecommunications services; *and*

WHEREAS, When it passed the Telecommunications Act of 1996, Congress established a definition of "information services" and validated the FCC's previous rulings that enhanced services should be regulated on a different basis than telecommunications services; but Congress did not state that services that combine elements of information services and elements of telecommunications services should be regulated under Title I; *and*

WHEREAS, In 1998 the FCC reported to Congress that carrier regulation should be applied solely to companies that provide underlying transport, and not to the "information services" that are "built on top" of those facilities, and it tentatively concluded that certain phone-to-phone VoIP calls "bear the characteristics" of telecommunications services; *and*

WHEREAS, The Telecommunications Act of 1996 preserves the jurisdiction of the States to regulate intrastate telecommunications services; *and*

WHEREAS, Telecommunications Services associated with information services may be unregulated or more lightly regulated under the FCC's statutory forbearance powers [47 U.S.C. § 160]; *and*

WHEREAS, In February, 2003, NARUC adopted a resolution regarding VoIP services advising the FCC that a decision declaring all phone-to-phone calls to be information services by virtue of Internet technology might be inconsistent with the 1996 Act and could have negative effects on various telecommunications policies, including universal service, *now therefore be it*

RESOLVED, That the National Association of Regulator Utility Commissioners (NARUC), convened in its November 2003 Annual Convention in Atlanta, Georgia, that, in accordance with the principle of technological neutrality, regulatory jurisdiction should be based, whenever possible, on the characteristics of a service, not on the technology used to provide that service, whether the service is commingled with any other service or the speed or capacity of that service; *and be it further*

RESOLVED, That NARUC urges the FCC to carefully consider the following:

- Uncertainty and reduced capital investment while the scope of the FCC's authority under Title I is tested in the courts;
- Loss of consumer protections applicable to telecommunications services under Title II;
- Disruption of traditional balance between Federal and State jurisdictional cost separations and the possibility of unintended consequences and increased uncertainty;
- Increases risk to public safety;
- Customer loss of control over content;
- Loss of state and local authority over emergency dialing services; and
- Reduced support base for Federal and State universal service as well as State and local fees and taxes, *and be it further*

RESOLVED, That State and Federal regulators should work together to adapt their regulatory oversight to the technological changes in communications markets so that all consumers receive the benefits of these new technologies; *and be it further*

RESOLVED, that NARUC General Counsel is authorized to make filings consistent with this resolution, including filing *amicus curiae* briefs in court proceedings.

Sponsored by the Committee on Telecommunications
Recommended by the NARUC Board of Directors, November 18, 2003
Adopted by NARUC Convention, November 19, 2003

The CHAIRMAN. Thank you, Mr. Wise.
Mr. Britt?

**STATEMENT OF GLENN A. BRITT, CHAIRMAN AND CHIEF
EXECUTIVE OFFICER, TIME WARNER CABLE**

Mr. BRITT. Good morning, Chairman McCain and Members of the Committee. My name is Glenn Britt, and I'm Chairman of Time Warner Cable. Thank you for inviting me here today to talk about our experience in deploying voice over IP.

I request that my full written statement be included in the record.

The CHAIRMAN. Without objection.

Mr. BRITT. Time Warner Cable serves nearly 11 million basic television subscribers around the country, and over three million broadband subscribers, in over 27 states. We are pleased, at this point, to be adding voice service to these offerings.

I'd like to make three points this morning. First, we, in our company, are using voice over IP technology today, and we have been providing voice service in Portland, Maine, since early last year. Our service looks and feels just like conventional telephone service. The customers can use their existing phones, their existing phone jacks, and they could even keep their same telephone numbers.

In the 9 months that we've been operating in Portland, we've gained 12,000 customers, and that's about 8 percent of the available homes in that territory. Based on that success, we plan to launch voice in almost all of our markets this year so that all of our customers will be able to benefit from this new service.

My second point today is that our voice over IP service complies with all of the important public policies and social issues that we've been talking about this morning. These include E-911, or however that may evolve, access for the disabled, payment into universal service funds, and cooperation with law enforcement agencies.

My third point is that we believe the introduction of this technology presents policymakers with an opportunity to rethink the existing regulatory framework. A new regulatory structure could encourage investments and deployment of these new technologies. And as voice over IP services are introduced, there's a need for a regulatory structure that encourages and promotes investment in this new technology, and we think the time for doing that is now.

Traditional phone regulation was developed in an era when the phone company was established as a business with guaranteed financial return, and regulation, the old regulation, was intended, in part, to protect against the exercise of their monopoly power. This regulation should not apply to this new technology or to new competitive entrants.

We are at a juncture where the government, as you've been hearing this morning, really needs to examine many parts of the telecommunications regulatory framework, and new regulations should promote the development of new technologies and competition. But we think we should retain requirements that pertain to these very important social policies that we've been talking about, E-911, et cetera.

The NCTA, of which I am chairman this year, has proposed a regulatory approach to voice over IP that could accomplish these goals. It calls for balancing VoIP providers' rights and responsibilities to provide all of the necessary public-policy objectives, but through the lightest possible regulation. These ideas are described in greater detail in the NCTA white paper, which I have attached to my testimony for your consideration.

Mr. Chairman and Members of the Committee, we are very excited about the future, and we believe that establishing an environment in which providers feel confident to invest, innovate, and deploy this new technology will best serve the public.

Thank you, again, for this opportunity, and I look forward to answering your questions.

[The prepared statement of Mr. Britt follows:]

PREPARED STATEMENT OF GLENN A. BRITT, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, TIME WARNER CABLE

Good morning Chairman McCain, Senator Hollings, and members of the Committee. My name is Glenn Britt, and I am Chairman and CEO of Time Warner Cable. Thank you for inviting me to speak here today about Time Warner Cable's experience deploying Voice-Over-Internet Protocol, and for providing an opportunity to share my thoughts on the important role policy makers and regulators can play in facilitating the growth and development of this new voice service.

Introduction

Time Warner Cable is the Nation's second largest MSO, serving nearly 11 million video subscribers and over 3 million broadband subscribers in 27 states. Time Warner Cable offers subscribers a wide array of entertainment and communications services, including basic cable, digital cable, high-speed data, video on demand, and subscription-based video on demand services. Time Warner Cable is also taking a lead role in offering other new products to its customers including High Definition Television (HDTV), Digital Video Recording (DVR) functionality, and home networking to interconnect multiple computers in the household with a single broadband connection. And as I will discuss in more detail this morning, we have already begun the process of adding to this mix a highly competitive facilities-based voice offering to the more than 18 million Americans within Time Warner Cable's service areas.

Time Warner Cable's VoIP Service Will Fulfill the Goal of Facilities-Based Telecommunications Competition

Advances in Voice-Over-Internet Protocol technology—or “VoIP” as it has come to be known—give Time Warner and other cable operators the ability to fulfill the vision of the 1996 Telecommunications Act by bringing true facilities-based competition in telephony services to the marketplace. Since 1996, cable operators have invested more than \$84 billion in private risk capital to rebuild and upgrade their facilities. VoIP technology allows cable operators to use these new broadband networks to offer subscribers high quality, reliable, local and long distance telephony services, making it an economically feasible means of competing with incumbent carriers. The development of IP-based telephony services also gives the few cable operators that have not yet upgraded their systems another reason to do so.

After several years of testing and developing a potential VoIP offering, Time Warner Cable launched what we call “Digital Phone” on a commercial basis to residential customers in Portland, Maine in May 2003. Today, we provide Digital Phone service to nearly 12,000 customers in the Portland area, and we continue to add VoIP capability to our cable systems. We recently launched Digital Phone service in Raleigh, North Carolina, and I am pleased to report that we plan to make Digital Phone operational throughout the majority of the Time Warner Cable footprint by the end of 2004.

To the customer, Digital Phone feels just like conventional telephone service. When a customer orders Digital Phone service, Time Warner Cable installs a new cable modem/telephony device called a Multimedia Terminal Adapter or “MTA” in the customer’s home. The MTA is connected to existing inside wiring, enabling a subscriber to receive voice service over each existing telephone jack in his or her home. In addition, consumers switching to Digital Phone can maintain their current telephone numbers, and have access to toll-free 800 calling, Telecommunications Relay Services for the disabled, Enhanced 911 (E911) services, and Directory Listings.

With respect to matters of particular importance to this Committee, let me emphasize that Time Warner Cable contributes to both state and Federal universal service funds in connection with our Digital Phone service. Digital Phone also includes the capability to assist law enforcement agencies by permitting the interception, when necessary, of both call identifying information and call content in response to lawful requests. Time Warner Cable views this as a critical aspect of its service in this time of heightened national security and law enforcement concerns.

Time Warner Cable’s Digital Phone service is delivered over a managed network with quality of service standards designed to ensure that customers are provided with the same high quality of service they have come to expect from traditional telephone service. The upgraded, two-way capable, digital network that we have built during the past several years is the central component of the architecture used to provide Digital Phone services. We are deploying devices called “softswitches” on a regional basis, which manage, route, and control calls originating from and terminating into our network and provide vertical telephone features (such as caller ID and call waiting) without the need for a Class 5 circuit switch. Using the softswitch architecture, calls travel over a network managed by Time Warner Cable—not the public Internet—as they move toward their final destination, whether that is on our network or a location on the Public Switched Telephone Network (PSTN).

When calls to reach customers not served by Time Warner Cable must traverse the PSTN, Time Warner Cable completes these calls through its relationships with competitive local exchange carriers. We recently announced strategic relationships with MCI and Sprint under which those carriers will assist in the provisioning of Digital Phone service to customers, termination of IP voice traffic to the public switched telephone network, delivery of Enhanced 911 service, local number portability and carrying long distance traffic.

With the rollout of Digital Phone, Time Warner Cable consumers are already benefiting from having a choice of facilities-based telephone providers. Moreover, deployment of VoIP service by Time Warner and other cable operators also has the potential to offer consumers new features and functionality such as multimedia conferencing, interactive gaming, and other multimedia applications which will over time demonstrate the real benefits consumers can reap from the integration of video, data, and voice services over a single broadband network. It is the next development in the increasingly competitive communications environment where cable competes for customers with telephone companies, satellite distributors, and others offering one or more services. It is no surprise that cable operators have begun and will continue to embrace this technology. Time Warner Cable is leading the way.

VoIP Regulation Should Encourage and Promote This New Competition

The absence of a clear regulatory framework for VoIP posed a dilemma for Time Warner Cable as we were preparing to bring the service to market. We could assert that VoIP was an unregulated information service and risk challenges from state PUCs and incumbent telephone companies. Alternatively, we could abide by the regulations applicable to more traditional telephone services and risk becoming saddled with a legacy regime in which IP technologies and service offerings do not fit precisely and that, therefore, is inappropriate to the unique character of IP-based telephony. In the interests of rolling out our service in the smoothest possible manner, we decided to obtain state regulatory certification for our VoIP offerings and to comply with traditional telephony requirements while expressly reserving our right to revisit this issue when the FCC and Congress established the appropriate regulatory structure for VoIP services.

I respectfully submit that the time for establishing this structure is now. Traditional phone regulation was developed in an era in which the phone company was an established local monopoly with a guaranteed financial return, and regulation was imposed in an effort to protect consumers against the exercise of monopoly power. These principles do not apply to the new world in which VoIP will operate, and it makes no sense to force VoIP—and other technologies that may emerge—into an outdated regulatory scheme. The introduction of new technologies such as VoIP presents an opportunity for the government to reexamine the rules applicable to competitive entrants, and to develop a new, Federal regulatory scheme for VoIP that will allow its widespread and speedy deployment, regulating only where demonstrably necessary and leaving the rest to the marketplace.

The government's valid concerns—like E911, support for law enforcement needs, access for persons with disabilities, continued funding for universal service, and other important consumer protections—can be satisfied without forcing VoIP into traditional telephony regulation. In short, critical public policy objectives can be satisfied without the wholesale importation of legacy requirements that have failed to keep pace with technological advancements and a more competitive environment. The National Cable & Telecommunications Association, of which Time Warner Cable is a member and whose board of directors I chair this year, has proposed a regulatory approach to VoIP that could accomplish this goal.

NCTA has proposed a four-prong baseline test to determine whether a particular IP-based voice service should be subject to a new regulatory framework. The test is based on whether the service has the following four characteristics:

1. it makes use of the North American Numbering Plan (7 or 10 digits phone numbers to reach a called party);
2. it is capable of receiving calls from or terminating calls to the public switched telephone network at one or both ends of the call;
3. it represents a possible replacement for “plain old telephone service”; and
4. it uses Internet Protocol transmission between the service provider and end user customer.

If a service meets these qualifications, NCTA calls for balancing VoIP providers' rights and responsibilities to achieve all necessary public policy objectives but through the lightest possible regulation.

For example, under this framework, qualifying VoIP providers would be assigned vital responsibilities, such as providing assistance to law enforcement and public safety according to the principles outlined in CALEA; offering 911/E911 services and access for the disabled; contributing to the Universal Service Fund; participating in intercarrier compensation; and complying with general consumer protection requirements. At the same time, such providers would be afforded certain rights essential for successful deployment of competitive voice services, such as the efficient exchange of traffic on public and private networks, number portability, access to 911/E911 resources, proper compensation for terminating calls, non-discriminatory access to universal service support, and access to rights-of way and other facilities without incremental fees. These ideas are described in greater detail in an NCTA White Paper titled: “Balancing Responsibilities and Rights: A Regulatory Model for Facilities-Based VoIP Competition.” I have attached to my testimony a copy of this paper for your consideration.

Conclusion

Mr. Chairman and Committee Members, we are excited about the future, and believe that a minimally regulatory environment that ensures VoIP providers comply with vital requirements, while still retaining a framework in which providers feel confident to invest, innovate and deploy new technologies like VoIP, will best serve

the public. I thank you again for the opportunity to appear to discuss the exciting opportunity in the communications marketplace presented by the emergence of VoIP technology. I look forward to your questions.

ATTACHMENT

National Cable & Telecommunications Association—February 2004—An NCTA Policy Paper

BALANCING RESPONSIBILITIES AND RIGHTS: A REGULATORY MODEL FOR FACILITIES-BASED VOIP COMPETITION

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A REGULATORY MODEL FOR FACILITIES-BASED VOIP COMPETITION

Introduction and Executive Summary

Today, most American households do not have a choice of facilities-based local telephone service providers. They have not realized the benefits of such choices despite nearly a decade of efforts by lawmakers and regulators to promote facilities-based competition in the local telephone marketplace. Although some cable companies are providing an alternative with circuit switched telephone service, with the deployment of cable-based Internet Protocol ("IP") phone services, customers will enjoy new options for a full suite of facilities-based voice services.

Forms of non-facilities-based Voice over Internet Protocol ("VoIP") service exist today, but they generally do not offer the *reliability* and *quality* that consumers have come to expect from "plain old telephone service" ("POTS") offered by incumbent local exchange companies ("ILECs") and most competitive local exchange companies ("CLECs"). Cable communications companies are working to introduce a new generation of phone services that will offer the flexibility and economy of IP technology (*i.e.*, the shared transmission of voice, data, and video information via a managed network) and the reliability and quality of service that consumers desire. Importantly, VoIP services delivered over a broadband cable network will, over time, provide wide-scale residential phone competition that is both *facilities-based* and *sustainable*.

The cable industry is excited about the consumer benefits and business opportunities that VoIP services will create, and the industry is devoting capital, personnel, and other resources to make facilities-based VoIP services a marketplace reality. Resources and the state of technological development, however, are not the only factors that will affect the availability of VoIP services. Regulatory uncertainty—and the potential for application of unnecessary or overly burdensome regulation—will also affect whether, when, and how VoIP services are deployed.

The Internet and information services generally have succeeded, in large measure because of regulators' prescient and courageous decision, made more than two decades ago, to promote competition in interstate information services and to fence them off from unnecessary Federal and state regulation. Commercial mobile radio services ("CMRS") have similarly been the subject of pro-competitive and deregula-

tory policies, again with salutary results in terms of investment, speed of innovation, and competition. Unfortunately, this has not generally been the case for CLECs. Although some states have adopted a hands-off approach to regulating new entrants, many states have imposed varying levels of traditional telephone regulation on those new entrants. It is unknown how the costs of this regulation have affected the willingness of companies to commit risk capital and provide competitive alternatives. Establishing a clear legal framework that promotes the emergence of VoIP services and ensures their freedom from unnecessary regulation can have equally beneficial results for the development of telephone competition, particularly in the residential mass market.

Much of the public policy discussion surrounding VoIP has centered on the appropriate regulatory classification of such services. Such an approach, however, has several shortcomings, as each regulatory category carries with it a history of regulatory assumptions that may or may not be appropriate for new technologies such as VoIP and the services they spawn. For that reason, this policy paper chooses instead to describe the cable industry's vision for a regulatory approach that will lead to efficient and rapid deployment of facilities-based VoIP services. We describe the public policy objectives that should be pursued to encourage the growth of VoIP services. We propose a regulatory roadmap that: (1) assigns to VoIP service providers vital *responsibilities*; (2) discusses certain responsibilities that VoIP service providers may undertake on a voluntary basis, but which should *not* be imposed upon them; and (3) identifies *rights* that are essential for VoIP service deployment. We also establish a baseline definition as to *which* VoIP services should have such rights and responsibilities. In doing so, we suggest that such an approach be applicable to new entrant VoIP service providers based upon the precise nature of the services they provide, regardless of whether they provide those services over their own facilities or the facilities constructed by others.

Protecting VoIP services from unnecessary regulation does not require that important public policies be neglected. Even under a generally deregulatory regime, any VoIP service that meets a baseline test as proposed herein¹ can, and should, meet certain public policy responsibilities and requirements such as the principles set forth in the Communications Assistance for Law Enforcement Act ("CALEA"), the offering of 911/E911, access for the disabled, and appropriate contributions to universal service. But the overall direction of public policy should be toward a deregulatory environment in which even the most vital public policy objectives are secured through the lightest possible regulation, so as not to forestall the many benefits of these new services.

Similarly, there are a number of legacy utility requirements that should not be imposed on VoIP service providers. Most such requirements date from the era of a single provider of phone service and are inappropriate for competitors using nascent technologies that offer alternatives to incumbent providers. In particular, a number of legacy requirements relate to billing, payment, credit and collection, and quality of service standards. Competitive marketplace forces, rather than prescriptive rules, can address these issues much more effectively for non-incumbent providers of VoIP services. Regulators should make a comprehensive effort to review and eliminate such regulatory requirements for VoIP services.

VoIP service providers, particularly facilities-based providers, do, however, require certain rights irrespective of whether the provider's service is ultimately determined to be an "information service," a "telecommunications service," or another type of service. These rights relate generally to interconnection and the exchange of traffic, the right to obtain telephone numbers and have them published in telephone directories, the right to access the facilities and resources necessary to provide VoIP customers with full and efficient 911/E911 services, the right to be compensated fairly for terminating traffic delivered from other entities and the right to non-discriminatory access to universal service support. In addition, facilities-based VoIP providers need access to poles, ducts, conduits and rights-of-way, regardless of the ultimate regulatory classification of VoIP services.

In the final analysis, facilities-based VoIP services can be the breakthrough that fulfills the vision of the Telecommunications Act of 1996² ("1996 Act") for vast numbers of residential consumers. The cable industry stands ready to play a lead role, just as it has done in making residential broadband Internet service a widespread

¹The proposed four-prong test requires that a VoIP service (1) use North American Numbering Plan ("NANP") resources, (2) receive calls from—or terminate them to—the public switched telephone network ("PSTN"), (3) represent a possible replacement for POTS, and (4) use Internet Protocol transmission between the service provider and the end user customer, including use of an IP terminal adapter and/or IP-based telephone set.

²Telecommunications Act of 1996, Pub.L. No. 104–104, 110 Stat. 56 (1996).

and desirable service. This breakthrough will occur most rapidly and ubiquitously if Federal and state policymakers and regulators affirmatively promote VoIP services as an important policy objective and adopt a predominantly deregulatory approach to VoIP services.

I. What is VoIP?

VoIP is the convergence of voice and data into a single bitstream, which enables the provision of innovative offerings that integrate the two in ways not possible using traditional circuit-switched technology. Voice communications are digitized into data packets and routed in that form over either managed IP networks and/or over the public Internet to the desired location using IP addressing. As such, VoIP, in and of itself, is not a service. Rather, VoIP is a technology that allows voice traffic to be packetized and transported or routed over privately managed networks as data packets. Because the vast majority of telephone subscribers continue to be served by incumbent LECs on the public switched telephone network ("PSTN"), most VoIP-based calls made today continue to traverse, at some point, the PSTN. As VoIP-based services become more prevalent, however, the technology will eliminate the need for both traditional circuit switching and the public switched telephone network ("PSTN").

In traditional circuit-switched telephony networks, a dedicated path, or channel, is opened between the parties participating in the call. No other traffic can pass over that channel while the call takes place. This dedicated channel remains open until the parties terminate the call, thus freeing up the channel for use in another call. In VoIP telephony—as with other IP-based services—dedicated circuits are not used. Multiple conversations are sent over the same channel as separate streams of data packets. When there is a lull in any particular conversation, other data packets can be carried over the same portion of the network, thus making the network more efficient than a traditional circuit-switched network. In technical terms, VoIP uses the network more efficiently because it combines, or multiplexes, multiple sets of data over the same physical path.³

VoIP is an attractive technological approach for cable system operators who have already entered the local telephone market as well as those offering voice services for the first time. Compared to circuit-switched telephony, VoIP may result in lower (though still significant) rollout costs, increased flexibility, and more innovative and advanced services. More specifically, VoIP allows a provider to avoid the huge capital expenditures and investments needed to purchase and install circuit switches. Furthermore, VoIP utilizes data paths that the cable industry has already invested in and built. These existing paths facilitate easy software changes and additions to service packages, as well as innovative combinations of voice, data, and fax services.

As with many other technical pursuits, standardization is important to VoIP. Cable companies want to be able to purchase equipment from various vendors, and to know that the equipment will be interoperable. To that end, CableLabs, the industry's research consortium, has been involved in developing uniform technical specifications for many years, including a successful effort to develop cable modem technical specifications. The Data Over Cable System Interface Specification ("DOCSIS") is also the underlying specification for a CableLabs project known as PacketCable. Very simply, PacketCable is a common platform and set of interoperable interface specifications for delivering advanced, real-time multimedia services, including not only VoIP, but also multimedia conferencing, interactive gaming, and other multimedia applications. The VoIP specifications are written to do exactly what today's analog, circuit-switched phone network does, from dial tone to ring tone. But unlike other VoIP specification efforts that address only individual portions of how to make an IP phone call, PacketCable addresses the entire journey.

The term "VoIP" encompasses these, as well as many other services, ranging from voice-enabled instant messaging and chat and voice-enabled gaming (such as Xbox Live) to services which replicate POTS. In many instances, "VoIP" will simply support a voice application or software application. Among the services that some cable operators are considering are "unified" messaging (whereby users have a single message platform for e-mail, voice-mail, faxes, and the like); personal portals; caller ID on television sets; talking e-mail; and customized dial-tones and greetings. VoIP may also make possible advanced video conferencing services including a combination of voice, video, and data delivery. Furthermore, with VoIP, some consumers may eventually be able to use the Internet from any location and instruct a home phone to forward calls to another phone number or listen to voice-mail via the Internet from any location. Or, in an example offered by FCC Chairman Michael Powell,

³ See *VoIP—the Enabler of Real Telecom Competition*, Goldman Sachs Global Equity Research Jul. 7, 2003 at 3.

because “[VoIP] can be readily integrated with other computing systems. . . you make an Internet call to a doctor’s office to make an appointment. The doctor’s system calls up your medical records, your medications, and your last visit and instantly displays them. It also brings up the appointment times available, allows you to select one and then calls you back, or sends a text message to your cell phone, the day before the appointment to remind you.”⁴

Even among those VoIP services that are “phone-like” there are significant differences. For example, the IP data packets used by services from some of the currently well-known providers, such as Vonage, travel over the public Internet. Facilities-based cable offerings, in contrast, will be able to transport IP data packets over their private managed IP networks with end-to-end quality of service monitoring (while still interconnecting with the PSTN as necessary). Moreover, with a cable-based VoIP service, it is possible to offer a robust VoIP service to a customer that does not subscribe to high-speed Internet access service. At least one cable company is currently offering its VoIP product to customers who do not subscribe to high-speed Internet access.

The VoIP services of particular concern in this paper might be more properly referred to as “IP Phone” services—those that in some ways mimic traditional telephone service. It appears, however, that the term “VoIP” has come to commonly refer to these phone-like services and thus this paper will use that term. It is important to recognize, however, that there remain distinctions among the type of VoIP-based services discussed herein. Indeed, nomenclature may be part of the very debate over VoIP policies. As discussed in more detail below, however, the cable industry believes that regulatory distinctions should be drawn based upon the type of services being provided by new entrant VoIP providers and not whether, for example, the service provider routes calls over the “Internet” or owns the facilities over which it routes calls. Few would argue, for example, that applications, or devices, where voice functionality is ancillary to the actual purpose of the service or device and where such applications do not fall within the specific VoIP service defined herein—as in voice-enabled gaming—should be regulated in the same manner as a traditional phone service.

Given these many distinctions, policymakers should establish a *baseline test* to determine whether an IP-based voice service should be subject to any regulation at all⁵ (as described in Section V D). Specifically, that test should be based on whether the VoIP service in question has the following characteristics:

1. it makes use of North American Numbering Plan (“NANP”) resources;
2. it is capable of receiving calls from or terminating calls to the public switched telephone network (“PSTN”) at one or both ends of the call;
3. it represents a possible replacement for POTS; and,
4. it uses Internet Protocol transmission between the service provider and the end user customer, including use of an IP terminal adapter and/or IP-based telephone set.⁶

IP applications such as voice communications overlaid on video gaming or video chat, which do not have the characteristics of the first three prongs above, should not be subject to regulation, much less traditional telecommunications regulation. Such applications generally would not use NANP resources nor would they have the ability to receive calls from or terminate them to the PSTN. The services covered by the four-prong test, as with others that are facilities-based, would fulfill the promise of the 1996 Act in promoting the goal of greater residential competition. Services lacking characteristics of the fourth prong (*i.e.*, lacking an IP based connection to the end user), are not addressed by this VoIP proposal.

⁴See *The Age of Personal Communications: “Power to the People”*, Remarks of FCC Chairman Michael K. Powell Before the National Press Club, Washington D.C. (Jan. 14, 2004), available at <http://www.fcc.gov/commissioners/powell/spmkp011404.pdf>. In a further example “[s]imilar potential rests with police and fire response systems. The 911 system is vital in our country, but it is limited functionally. In most systems, it primarily identifies the location from which the call was made. But an Internet voice system can do more. It can make it easier to pinpoint the specific location of the caller in a large building. It might also hail your doctor, and send a text or Instant Message alert to your spouse.”

⁵While it may, however, be warranted to require applications that do not meet this baseline test to provide assistance to law enforcement for security reasons, there appears to be no justification for imposing traditional telephone regulation upon such applications.

⁶See *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd. 11501 (1998) (“*Stevens Report*”). In particular, the report established a four-part test, with the fourth prong relating to equipment. Given the advances in customer premises equipment, and the blurring of the lines between computers and phones nearly six years later, the fourth prong in that 1998 report no longer seems germane.

II. The Opportunity Presented by Facilities-Based VoIP Services

Over the years, and particularly since the 1996 Act, a consensus has evolved that American consumers will reap the greatest benefits from communications policies that encourage industry investment, foster technological innovation and service deployment, and increase consumer choices. To that end, Congress, in the 1996 Act, declared its intention to promote competition and to eliminate unnecessary regulation.⁷ These goals—investment, innovation, choice, competition, and deregulation—should be the primary reference points for policymakers’ response to emerging VoIP services.

A central objective of the 1996 Act was to introduce facilities-based competition into the local phone services market.⁸ Nearly eight years later, competition in the local phone services market remains a hope rather than a reality for the vast majority of residential consumers. Although some markets enjoy the benefits of facilities-based competition from companies who have taken the risk and made the investment, this is atypical. In a majority of markets, residential consumers have no meaningful choice of facilities-based local phone service providers.

This is despite the fact that the cable industry has recognized the importance to its customers of developing robust, competitive local phone services. Companies such as Cablevision Systems Corporation, Charter Communications, Comcast Corporation, Cox Communications, Inc., GCI Cable, Inc., and Insight Communications collectively serve over 2.5 million subscribers with circuit-switched telephone service.⁹ And even as these companies maintain and improve existing circuit-switched local telephone operations in their service areas, they are preparing to expand the range of service options—and the places in which those options are available—using facilities-based VoIP technologies.

In other areas where a choice exists, it typically consists of mere resale of the incumbent’s services or the use of the incumbent’s unbundled network elements in a combination known as “the unbundled network element platform” or “UNE–P.” The regulatory regimes of resale and UNE–P were intended, pending the emergence of facilities-based competition, primarily as transitional mechanisms. Unfortunately, the telecom industry has been mired in nearly eight years of rulemakings and litigation over the UNE regime and related provisions of the 1996 Act. What has languished, especially in the residential marketplace, is the development of the robust *facilities-based* competition that Congress believed could best provide enduring consumer benefits.

Now, however, VoIP technology offers the key to this long-awaited competition. The potential exists—by harnessing the same IP technology that is the foundation of the Internet—for a platform other than the incumbents’ local exchange network to deliver telephone service on a wide scale, providing residential consumers with real choice in facilities-based local phone service. IP technology offers the additional consumer benefit of enabling third parties to utilize this new platform to provide VoIP service in competition with one another as well as with the incumbent telephone companies.

⁷ See *1996 Act* at preamble (stating that the purpose of the 1996 Act is to “*promote competition and reduce regulation* in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies”) (emphasis added).

⁸ The FCC has explicitly found that “facilities-based competition serves the Act’s overall goals.” *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01–338, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03–36, at 70 (rel. Aug. 21, 2003). Specifically, “[f]acilities-based competition better serves the goal of *deregulation* because it permits new entrants to rely less on incumbent LECs’ facilities and on regulated terms for access and price. And it serves the goal of *innovation* because new facilities are more likely to have additional capabilities to provide new services to consumers and competitors’ deployment of new facilities is likely to encourage incumbents to invest in their own networks. Facilities-based competition also increases the likelihood that new entrants will find and implement *more efficient technologies*, thus benefiting consumers. . . . Finally, facilities-based competition creates network redundancy, which increases *reliability* and enhances *national security*.” *Id.* at n. 233 (emphasis added; internal citations omitted).

⁹ In the former AT&T Broadband territories, Comcast continues to offer circuit-switched telephone services in each of the 18 markets where competitive telephone service was previously offered by AT&T Broadband, and to solicit and process orders from new customers. As of the third quarter of 2003, Comcast had over 1.3 million residential phone customers (including a small number of customers from preexisting Comcast operations in Maryland, Michigan, and Northern Virginia), making it the largest residential facilities-based CLEC in the U.S. Comcast currently offers a facilities-based circuit-switched competitive choice to nearly nine million households.

Cox, a pioneer in circuit-switched cable telephony offers competitive circuit-switched telephone services to over 4 million households in 11 major markets across the country. As of the third quarter of 2003, Cox had nearly 1 million residential phone customers.

As a result of more than \$84 billion of private investment in upgrades and enhancements to cable technology since 1996, cable operators are preparing to provide innovative facilities-based VoIP services in many areas—services that support 911/E911 and the principles of CALEA and are delivered via a managed network with a quality-of-service standard. VoIP regulatory policy must ensure that cable operators who invest in the platform that makes this competition possible are not disadvantaged by regulation in favor of those who use that platform to compete with cable's VoIP services. With the right regulatory framework, VoIP technology will increase industry investment, foster innovation, and provide consumers with attractive alternatives to POTS and to other communications services.

III. The Regulatory Challenge of Deploying New Services

Potential providers of any new services face the uncertainty of regulation at the federal, state and/or local level. Until now, consumers and providers have benefited from the decision by policymakers not to legislate or regulate in a manner that discourages innovation and investment in VoIP services.¹⁰ This is particularly so at the Federal level. For several years, limited forms of VoIP service have been offered without regulation. While the earliest forms of non-facilities-based VoIP service did not provide traditional phone service quality or reliability, consumers used those services to replace calls to countries with high international toll rates—with the strong encouragement of the Federal Communications Commission (“FCC”).¹¹ Today, providers such as Vonage, ePHONE, ICG Communications, Inc., and pulver.com are providing forms of VoIP services with little or no governmental regulation.¹²

While the Federal Government to date has suggested it will take a “hands-off” approach to regulating VoIP, a major concern for would-be VoIP service providers is that one or more states could subject their services to existing state-specific regulatory schemes and/or establish new and equally burdensome regulations for VoIP services. State regulators have recognized the danger inherent in such an approach, as well. For instance, Colorado PUC Chairman Gregory E. Sopkin has warned that the “nascent VoIP industry should not be subject to death-by-regulation, which could well occur by having 51 state commissions imposing idiosyncratic, inconsistent, and costly obligations.”¹³ (State regulatory activity is described in the next section).

The application of traditional *state* telephone regulations risks encumbering VoIP services with a web of costly and potentially inconsistent rules that will inevitably deter potential market entrants from offering the services, especially since the efficient multi-state rollouts of VoIP will depend on new centralized ordering, provisioning, and billing systems. Encumbrances are also possible at the *local* level, where at least some communities argue that *all* services delivered over cable plant should be subject to separate and duplicative municipal fees, requirements for addi-

¹⁰ See, e.g., *Stevens Report* (noting the FCC's desire for the VoIP industry to develop from a nascent service prior to making regulatory decisions that could stifle development: “[W]e recognize the need, when dealing with emerging services and technologies in environments as dynamic as today's Internet and telecommunications markets, to have as complete information and input as possible”).

¹¹ See, e.g., Rules and Policies on Foreign Participants in the U.S. Telecommunications Market, Report and Order and Order on Reconsideration, 12 FCC Rcd. 23891 at ¶16 (1997) (noting that new technologies such as “Internet telephony are already putting significant pressure on international settlement rates [and domestic collection rates]”; see also Kevin Tanzillo, *FCC to Teach Old Tricks to New Dogs*, Communications News, Jul. 1, 1996 (quoting former FCC Chairman Reed Hundt: “I think that Internet telephony will initially have the biggest impact on the price of international long-distance calls. . . . When China is more accessible to the Internet, it will come to pass that the current \$4.35 per minute charge for a long-distance call to China will dissolve like spit in the wind”).

¹² See *Petition for Declaratory Ruling That AT&T's Phone-to-Phone IP Telephony Services Are Exempt from Access Charges*, FCC WC Docket No. 02-361, Joint Comments of Association for Communications Enterprises, Big Planet, Inc., ePHONE Telecom, ICG Telecommunications, Inc., and Vonage Holdings Corp. (filed Dec. 18, 2002). But see *infra* Section IV (describing the efforts of some states to regulate VoIP service).

¹³ Colorado's VoIP proceeding (Dkt. 03M-220T), begun in May 2003, ended based on the “legal uncertainty of whether a state may regulate VoIP services,” concluding that “the most prudent course is to take no action with respect to VoIP pending FCC action.” See TR State Newswire, *PUC ends VoIP Investigation, Sopkin voices views on VoIP*, Jan 6, 2004. “Sopkin added that VoIP shouldn't be regulated like traditional phone service. ‘We should treat VoIP not as a problem, but a new opportunity for regulators to look at changing how the use of wireline infrastructure is compensated—through subsidies, intercarrier charges, and regulated rates.’ The chairman called on VoIP providers to seek free market solutions to intercarrier compensation and 911 service issues, urging them to negotiate service agreements ‘to show they are good corporate citizens and to show that traditional regulation is not necessary.’”

tional permits, quality standards, privacy rules, and the like.¹⁴ This local layer of regulation makes no sense when the new services can be offered simply by changing the pattern of signaling sent over an existing physical transmission facility, without imposing any additional burden on rights-of-way. This is precisely the situation with cable-delivered VoIP services.¹⁵ Moreover, local micro-regulation of new services such as VoIP would stifle them. Cable operators today can be subject to dozens or even hundreds of local franchising authorities for their cable systems in a single state. Offering VoIP services would be immensely more difficult with dozens or hundreds of inconsistent regulations.

Congress, the FCC, state legislatures and commissions, and local governments all need to adopt an approach that will encourage the deployment of VoIP services in general, and of facilities-based services (VoIP and otherwise) in particular. Factors warranting emphasis in the analysis include the nascent nature of the services, the desirability of fostering, on a broad scale, a facilities-based alternative to incumbent local phone services, delays in deployment that could result from a tangle of incongruous state and local regulations, the importance of providing regulatory certainty in the near term, and the likelihood that the VoIP services of various providers will include differing capabilities. For all these reasons, it is critical that policymakers and regulators ensure that regulation does not become an impediment to VoIP service testing, investment, innovation, and deployment.

Ultimately, however, much of the responsibility lies with the FCC. The FCC has the ability to bring states and providers together (for example, through its announced intention to issue a Notice of Proposed Rulemaking or "NPRM" on VoIP services soon) to determine on a uniform national basis which regulatory requirements are truly needed and which regulatory requirements will pose unnecessary barriers to entry and growth, as well as to articulate and enforce a suitably deregulatory (but not entirely deregulated) policy framework that allows for maximum flexibility, innovation, investment, and competition. The FCC's announced NPRM appears to have already had the effect of convincing states such as California to step back from efforts to possibly regulate VoIP providers as traditional telecommunications carriers.¹⁶

The FCC and state regulators, in developing a policy framework, should avoid perpetuating approaches that penalize industries such as the cable industry that have been willing to assume the added financial and other risks of building and continually upgrading the physical infrastructure needed to enable delivery of VoIP services. The FCC and state regulators should instead embrace regulatory approaches that encourage deployment of that competitive infrastructure.

Notwithstanding the regulatory challenge of deploying new services, cable operators have been among the early leaders in developing facilities-based VoIP technology to serve the residential market. Current company rollouts include:

Armstrong has partnered with VoIP service provider Vonage to offer Zoom phone service to cable customers throughout Armstrong's 11 cable systems, located in Kentucky, Maryland, Ohio, Pennsylvania, and West Virginia. The service is essentially a private label rebranding of Vonage service. Armstrong's residential packages range from a \$24.99 product with unlimited local and regional calling and 500 minutes of long distance across the U.S. and Canada to a \$34.99 product with unlimited local and long distance calling across the U.S. and Canada. Just as with the Vonage product, a potential Zoom customer must subscribe to broadband service and use a

¹⁴ See *Inquiry Concerning High Speed Access to the Internet over Cable and Other Facilities, Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities*, FCC GN Dkt, Nos. 00-185, 02-52, Comments of Alliance of Local Organizations Against Preemption (filed Jun. 17, 2002).

¹⁵ Likewise, regulators must not subject VoIP services to financial penalties in the form of high pole attachment fees. VoIP services will normally be carried over pre-existing facilities already attached to utility poles. There will be few if any new poles placed or new trenches dug, and there will be few if any new wires attached to existing poles. VoIP services delivered by cable operators will be offered by simply changing the pattern of electrical and optical signals carried over existing physical facilities already in use for other purposes (e.g., delivery of video entertainment and/or high-speed connectivity to the Internet). Regulators, in considering the issue of pole attachment rates, must therefore avoid applying regulatory categories or regulatory solutions to those new and innovative services developed with other technologies in mind. Clearly, it would make no economic or policy sense for regulators to take a regulatory approach to VoIP services which would result in an unearned windfall to those who control poles merely based on a change in the pattern of optical and electrical signals carried over existing facilities and infrastructure. A change in these signals has no economic or physical impact on poles, conduits, or rights-of-way, yet it is all that is needed to offer VoIP service.

¹⁶ See Ben Charny, *California eases up on Net phone rules*, CNET News.com (Jan. 5, 2004), available at http://news.com/2100-7352-5135188.html?tag=guts_lh_7352.

digital phone adapter which plugs into the DSL or cable modem (in this case a cable modem). The adapter has “[b]uilt in Quality of Service (QoS) technology [which] prioritizes your voice data over other [I]nternet traffic . . .”¹⁷

Cablevision launched Optimum Voice, a digital voice-over-cable service, in the fourth quarter of 2003 throughout its New York City metropolitan service area of more than 4 million homes (which includes Bronx, part of Brooklyn, Long Island and the Lower Hudson Valley as well as southern Connecticut and northern New Jersey). Optimum Voice is currently the largest facilities-based VoIP deployment in the United States. The service provides unlimited local, regional, and long distance calling across the U.S. (including Alaska and Hawaii) and Canada for a flat rate of \$34.95 per month. It includes five customer calling features (call waiting, caller ID, call return, three-way calling and call forwarding) and E911. Currently, Cablevision is offering Optimum Voice to its more than 1 million high-speed Internet service customers. Area code and phone number assignments are based on the location of the customer’s residence.

- *Charter* launched commercial VoIP service in September, 2002 in Wausau, Wisconsin and is now gearing up its marketing efforts. In addition to expanding VoIP in its Wisconsin footprint, Charter will launch VoIP service in several other markets this year.
- *Comcast*, the largest cable company with 1.3 million telephony subscribers nationwide, is currently testing VoIP near Philadelphia, Pennsylvania and plans to trial the service in several markets including Indianapolis, Indiana, and Springfield, Massachusetts in 2004. Comcast has indicated its intention to “differentiate itself from telcos with inexpensive deals on four lines, since they don’t cost the provider more than one, and video enhancement of service comparable with instant messaging, Internet chat or voice mail.”¹⁸
- *Cox* launched its first VoIP service, Cox Digital Telephone, in December 2003 in Roanoke, Virginia, representing the twelfth market in which Cox has introduced phone service. (In its other eleven telephone markets, Cox relies on traditional circuit-switched technology.) Cox Digital Telephone subscriptions grew on the order of forty percent in 2003. In the past several years, Cox has pioneered cable telephony via circuit switched technology, gaining experience central to its VoIP launch while earning highest honors in J.D. Power and Associates’ 2003 Residential Local Telephone Customer Satisfaction Study in the Western Region. Cox’s telephony launch using VoIP -based technology provides customers with the same lifeline service as traditional telephone service, including E911 access and popular calling features such as call waiting, caller ID and voice-mail. Cox’s self-managed VoIP architecture also supports local number portability, enabling customers to switch their existing phone numbers to Cox Digital Telephone service.

According to CNET News “[s]maller markets such as Roanoke represent 19 of the 21 other markets into which Cox wants to expand its voice service. VoIP is an ideal candidate—these areas might not generate the profits necessary to validate the outlay involved with a more traditional system, Cox spokesman Bobby Amirshahi says. ‘In smaller markets, it becomes a major question of whether you can justify the cost of circuit switched,’ according to Amirshahi.”¹⁹

- *GCI* has begun deployment of a hybrid VoIP/circuit switched service in Anchorage, Alaska, where it currently serves over 40 percent of the market, primarily via UNE-loop. The service being deployed is based on PacketCable standards from the customer premises to a media gateway and then uses GCI’s circuit-switched facilities. As GCI transitions customers to its own loop facilities, it will be able to reduce its use of the incumbent local exchange carrier’s facilities
- *Time Warner Cable* launched Digital Phone, its VoIP service, to subscribers in Portland, Maine in May of 2003. By year-end 2003, Time Warner Cable had signed up more than 9,000 subscribers who pay \$39.95 (for digital cable television and/or high-speed Internet subscribers) or \$49.95 (for customers that do not subscribe to digital cable television or high-speed Internet services) for unlimited local and domestic long distance calling. The service includes call waiting, caller ID and call waiting ID, access to E911, and the option of local num-

¹⁷ See <http://www.zoom-phone.com/features.php> or <http://www.vonage.com/features.php>.

¹⁸ See *Cable VoIP Will Provide the Facilities -Based Phone*, Communications Daily (Dec. 15, 2003), at 6, quoting Comcast CEO Brian Roberts speaking at the Commonwealth Club (San Francisco).

¹⁹ See Ben Charny, *Cox Communications Dives into VoIP*, CNET News.com (Dec. 15, 2003), available at http://news.com.com/2100-7352-5124440.html?tag=guts_lh_7352.

ber portability. Subscribing to digital cable television or cable Internet service is not a prerequisite to purchase Digital Phone, although a potential Digital Phone subscriber must, at a minimum, subscribe to either cable television service or high-speed Internet service.

Time Warner Cable recently launched its Digital Phone service to select customers in North Carolina and plans to offer the service by the end of 2004 in most, if not all, major markets in the 27 states it serves. This means the company's Digital Phone product should be available to nearly its entire footprint of over 11 million subscribers and over 18 million homes passed.

In December, 2003 Time Warner Cable announced a partnership with long distance companies MCI and Sprint to assist in provisioning Digital Phone service and to use their networks to carry calls from its cable network to receiving callers served by traditional PSTN-based providers. In addition to providing long distance services, MCI and Sprint will support E911 access and local number portability, permitting Time Warner Cable to continue its aggressive rollout in 2004.

As these services are deployed, cable companies continue to test and develop back-office support systems, provisioning and operational processes (including billing), and marketing programs. These efforts, and the various announced deployments, attest to the industry's belief that VoIP technology will ultimately permit cable operators to provide innovative, high-value residential local phone services at competitive prices. Clearly, the industry is excited about and committed to the potential benefits that can result from the widespread availability of VoIP services. Yet, a broad roll-out of these services is not assured. A key factor that will affect the ability of cable companies to offer commercially viable VoIP services is the (de)regulatory framework that applies to these services, particularly the services offered in competition with incumbent providers. Where incumbent utilities offer VoIP services in their legacy franchise or service areas as substitutes for POTS services, it is important for regulators to consider whether to maintain appropriate regulatory safeguards, particularly in light of the goal of promoting facilities-based competition in the 1996 Act.

IV. VoIP Regulatory Proceedings in the States

Some states, such as Colorado, Florida, and Pennsylvania have appropriately taken a deregulatory approach to VoIP services. As described below, other states are applying existing intrastate access charge regimes to VoIP services without awaiting the outcome of FCC proceedings addressing interstate access charges. Still others have required (or are considering requiring) VoIP service providers to comply with most or all state laws and regulations that apply to traditional telephone service. Below is a brief description of the major VoIP proceedings underway in the states:

Alabama—In July 2003 a group of local exchange carriers filed a Petition for Declaratory Ruling at the Alabama Public Service Commission (the "Alabama PSC") seeking to classify VoIP providers as "transportation companies" under Alabama law, and declaring that they are responsible for the payment of intrastate access charges. In August 2003 the Alabama PSC opened a proceeding to consider that request. Initial comments were filed October 31, 2003, reply comments were filed December 2, 2003, and the matter is under review.

California—On September 30, 2003, the California Public Utilities Commission ("CPUC") asked six VoIP providers, including Vonage and Net2Phone, to apply by October 22, 2003 for the same license that landline phone companies need to operate in California. In response to that request, all six providers sent letters to the CPUC arguing that their VoIP services are exempt from state telephone regulations because they provide interstate information services that are not subject to the CPUC's jurisdiction. The CPUC then held a VoIP Forum on November 13, 2003 and has considered opening a formal inquiry into VoIP service regulation. The decision to open such proceedings has recently been at least temporarily delayed at the request of the lead commissioner based on her assessment that California should conduct any proceeding *after* the FCC has established national policy.²⁰

Colorado—The Colorado Public Utilities Commission (the "Colorado PUC") opened a docket to determine the appropriate regulatory treatment of VoIP in May, 2003. The Colorado PUC closed the docket in January 2004, based in part on the "legal uncertainty of whether a state may regulate VoIP services," concluding that "the

²⁰ See Ben Charny, *California to License VoIP Providers*, CNET News.com (Sep. 30, 2003), available at http://news.com.com/2100-7352-5084711.html?tag=guts_lh_7352. See also Ben Charny, *California eases up on Net phone rules*, CNET News.com (Jan. 5, 2004), available at http://news.com.com/2100-7352-5135188.html?tag=guts_lh_7352.

most prudent course is to take no action with respect to VoIP pending FCC action.”²¹

Florida—The Florida legislature in 2003 passed, and the Governor signed, legislation stating “[that] the provision of voice-over-the-Internet protocol (VoIP) free of unnecessary regulation, regardless of provider, is in the public interest.” The law also specifically excludes VoIP from the statutory definition of a “service” subject to regulation, although the question of whether VoIP-based services are subject to intrastate access charges remains under the jurisdiction of the Florida Public Service Commission.²²

Minnesota—On August 13, 2003, the Minnesota Public Utilities Commission (the “Minnesota PUC”) ruled that Vonage is offering a telecommunications service and required Vonage to seek a certificate, file a 911 plan and submit tariffs within 30 days. A U.S. District Court granted Vonage’s request to enjoin that decision on October 7, 2003 and the Minnesota PUC stayed its decision while it is enjoined. The district court ruled Vonage provides an “information service” not subject to Minnesota PUC jurisdiction. The Minnesota PUC requested the district court to amend its findings or to make its injunction temporary and to allow further investigation and discovery or grant a new trial. Oral argument took place on December 13, 2003. The District Court declined to amend any aspect of its order and concluded that a new trial was not necessary.²³

Missouri—On September 12, 2003, while reserving its rights to argue for or benefit from any future regulatory determination relating to VoIP -based services, Time Warner Cable Information Services (“TWCIS”) filed an application for authority to offer IP based voice services in Missouri. The parties to the resulting docket agreed that a general discussion of VoIP was not necessary but, although TWCIS had agreed to abide by existing Missouri telephone rules until the regulatory classification of VoIP is resolved, the parties disagreed about the characterization of the service TWCIS intends to offer and the related regulatory restrictions and obligations associated with that service. Separately, the Missouri Public Service Commission (the “Missouri PSC”) sought comment from the Public Counsel as to whether it should open a generic proceeding to address regulatory issues surrounding VoIP services. The Missouri PSC subsequently chose not to open a generic proceeding, preferring instead to address issues in the context of the TWCIS application. A pre-hearing conference is scheduled for January 30, 2004. A proposed procedural schedule is to be filed by February 13, 2004.

New York—The New York Public Service Commission (the “NYPSC”) has ruled that VoIP service providers must pay access charges while preserving their right to be granted forbearance from regulation or to be alternately regulated based on any applicable decisions from the NYPSC or the FCC. The decision was based largely on the NYPSC’s view that under the *Stevens Report* the company was operating as a phone-to -phone VoIP provider offering a “telecommunications service”. Some parties have argued that the decision was based on a misreading of the report.

The NYPSC, pursuant to Frontier Telephone of Rochester’s complaint against Vonage for providing telephone service without complying with state regulation, opened a generic investigation of VoIP issues. Initial comments were due October 31, 2003 and reply comments were due November 14, 2003. The matter is now under review.²⁴

North Carolina—In May 2003, TWCIS applied for a certificate of public convenience and necessity to provide IP based voice services. The North Carolina Utilities Commission (the “NCUC”) granted TWCIS its certificates in July 2003 and rejected efforts by the Alliance of North Carolina Independent Telephone Companies to address a number of issues in the context of the certification proceeding. At the time,

²¹ Dkt. 03M—220T, See p. 11 supra.

²² See *The Tele -Competition, Innovation and Infrastructure Enhancement Act*, CS/SB 654 (FL, signed May 23, 2003).

²³ See *Matter of the Complaint of the Minnesota Department of Commerce Against Vonage Holding Corp. Regarding Lack of Authority to Operate in Minnesota*, Docket No. P-6214/C-03-108, Order Finding Jurisdiction and Requiring Compliance (rel. Sep. 11, 2003) (requiring Vonage to comply with all state laws pertaining to telephone service), *enjoined*, *Vonage Holdings Corp. v. Minnesota Public Utilities Comm’n*, No. 03 -5287, slip op. at 22 (D. Minn. Oct. 16, 2003).

²⁴ See, e.g., *Complaint of Frontier Telephone of Rochester Against U.S. DataNet Corporation Concerning Alleged Refusal to Pay Intrastate Access Charges*, No. 01-C-1191 (N.Y. Pub. Serv. Comm’n May 31, 2002) (subjecting VoIP service to access charges, but preserving U.S. DataNet’s right to be granted forbearance from regulation or to be alternately regulated based on any applicable decisions from the NYPSC or the FCC); *Complaint of Frontier Telephone of Rochester Against Vonage Holding Corp. Concerning Provision of Local Exchange and Inter-Exchange Telephone Service in New York State in Violation of the Public Service Law*, No. 03-C-1285, Notice Requesting Comment (N.Y. Pub. Serv. Comm’n Oct. 9, 2003) (initiating a similar proceeding involving Vonage).

BellSouth also sought a generic proceeding to address VoIP issues. The Commission determined that no such proceeding was necessary at that time.

Ohio—The Public Utilities Commission of Ohio (the “PUCO”) opened a generic investigation in April 2003 to examine how VoIP services are provided, and the form and level of regulation that should apply to those services. Answers to PUCO questionnaires were filed in May, 2003; initial comments were filed on June 13, 2003 and reply comments were filed July 7, 2003. Since that time TWCIS has applied for, and has received from the PUCO, authority to provide service, contingent on the outcome of the generic investigation. TWCIS’s application requested authority to provide IP voice services targeting the residential market using VoIP. TWCIS also requested waivers of various rules with which it found difficult to comply for its bundled service offering (in particular, offering stand-alone local service). The PUCO’s decision granted waivers contingent on the outcome of the open investigation into whether VoIP technology should be regulated as a telephone service.²⁵ Since then, Cincinnati Bell, the Ohio Telecommunications Association, and SBC-Ohio filed applications for rehearing of TWCIS’ application.

Pennsylvania—In May 2003 the Pennsylvania Public Utility Commission (the “Pennsylvania PUC”) opened a generic investigation into VoIP and it is effectively forbearing from regulating those services pending the outcome of that investigation.²⁶

Texas—In August 2003, TWCIS filed for a certificate of authority to provide IP based voice services in Texas. Several parties, including the Texas Coalition of Cities (“TCOC”) attempted to intervene. In particular TCOC raised issues regarding the classification and jurisdictional status of the services proposed by TWCIS, and how compensation for rights-of-way would be administered for those services. The Texas Public Utility Commission (the “Texas PUC”) denied intervention for all parties and it granted TWCIS’ application on December 12, 2003.

Wisconsin—On September 11, 2003, the Wisconsin Public Service Commission (the “Wisconsin PSC”) sent letters to VoIP providers 8x8, Vonage, and Delta 3 seeking information on the specific services being offered by those entities in Wisconsin. The PSC’s letters stated that such entities were not permitted to provide resold intrastate services in Wisconsin without certification and that any customer bills for intrastate services were void and not collectible.²⁷ The providers filed responses which are under review.

V. NCTA’s Approach: Balancing Responsibilities and Rights

Much of the discussion about VoIP services has focused on whether they should be classified as “information services,” “telecommunications services,” or another type of service. The assumption seems to be that VoIP service offerings first need to be assigned to a preexisting regulatory “box,” from which a variety of regulatory consequences will flow. It is usually assumed that classification of a VoIP service as a “telecommunications service” means that it will be subject to a wide range of traditional Title II requirements, and that classification of a VoIP service as an “information service” means that it will be entirely unregulated. As discussed later in this paper, we believe neither assumption is correct.

Rather than focusing on this regulatory classification issue, NCTA suggests that policymakers focus on the responsibilities and rights that are appropriate for new entrant competitors offering VoIP services, whether they do so through their own facilities or over the facilities of others. The cable industry believes that VoIP service providers that meet the four-prong test described above must assume certain fundamental regulatory responsibilities, including consumer protections of general applicability, assistance to law enforcement, and public safety obligations. The industry also believes that in order to provide service, VoIP providers—particularly those operating their own facilities—must be accorded certain rights. The regulatory classification under which this set of responsibilities and rights is established is important, though ultimately less important than those responsibilities and rights being established in a minimally regulatory framework.

VI. The Responsibilities and Rights of VoIP Providers

VoIP service providers, particularly those who build infrastructure that enables delivery of these services in competition with established local exchange carriers, must not be subject to unnecessary regulation, nor should they be disadvantaged as

²⁵ See Public Utilities Commission of Ohio (Case 03–581–TP–ACE).

²⁶ *Investigation into Voice over Internet Protocol as a Jurisdictional Service*, M–00031707 (May 5, 2003).

²⁷ See *8x8 Announces Receipt of Notification from Public Service Commission of Wisconsin*, 8x8 Press Release (Sep. 12, 2003), available at http://www.8x8.com/news_events/releases/2003/pr091203.asp.html.

compared to VoIP providers who build no facilities. The strong presumption should be that regulations designed for legacy telephone service should *not* apply to VoIP services unless they are essential to meet the key public health, safety, and other crucial responsibilities described below, even if regulators determine they are necessary for customers of incumbent telephone utilities who may use VoIP technologies in substitution for legacy POTS services. Experience has shown, time and again, that the best way to encourage new and innovative technologies and to secure the resulting public benefits is to ensure that only the most vital regulations apply—and even then, that those vital regulations be adapted to the characteristics of the new technology.

This approach would encourage innovation, conserve regulatory resources, derive the greatest public benefits and provide the certainty in the marketplace that investors need in order to support the deployment of facilities-based VoIP services. The alternative—presuming that legacy regulations *do* apply, unless expressly found not to apply—is a recipe for doubt and delay. Few, if any, competitive communications technologies have ever achieved widespread market acceptance where government has followed that path; policymakers should be careful to avoid it here.

The set of responsibilities to which providers of services meeting the four-prong test should adhere may be broken into several categories: public health and safety; universal service; intercarrier compensation; and consumer protections of general applicability.

Public Health and Safety

Providers of VoIP services meeting the four-prong test should have the following responsibilities, implemented in a manner appropriate to the technology:²⁸

- The obligation to cooperate with law enforcement, including compliance with the principles of CALEA based upon an IP -specific standard endorsed by an industry body.
- The obligation to provide consumers access to 911/E911 capabilities and to collect and remit funding for state or municipal 911/E911 systems. (In turn, statutory and other liability limitations for the provision of 911/E911 services should also apply.)²⁹
- The obligation to make services available to disabled consumers, in a manner consistent with Section 255 of the 1996 Act, and to collect funding for state and Federal TRS systems.³⁰

Universal Service

In addition, regulators should expect VoIP services that make use of NANP resources to ultimately contribute to Federal and state universal service programs on a par with other contributors. The principle of universal service—ensuring that affordable telephone service is available to high-cost areas and low-income users—has long been a cornerstone of communications policy. The 1996 Act codified principles of universal service and extended them to schools, libraries, and nonprofit rural health care providers.³¹ Cable companies that offer telecommunications services subject to assessment currently pay into the fund.

At some point, VoIP services that make use of NANP resources should also pay into the fund. It would be premature to impose such an obligation, however, without resolution of several critical issues related to universal service, which the FCC is examining.³² Among these issues is the question of whether the Federal universal service fund is properly sized and funded.

²⁸The FCC has ruled, for example, that, while facilities used solely for the provision of information services are not subject to CALEA, facilities used to provide both telecommunications and information services are subject to the requirements of the Act. *See Communications Assistance for Law Enforcement Act*, Second Report and Order, 15 FCC Rcd. 7105 at ¶¶ 12, 27 (1999). However, for both CALEA and 911/E911, some adjustments may need to be taken into account related to the specific features and capabilities of VoIP services.

²⁹As with all service providers that offer 911/E911 capabilities, VoIP service providers should be protected by statutory and other limitations on liability pertaining to the provision of 911/E911 services.

³⁰These rules have already been extended beyond the conventional range of Title II-type services, and the same considerations may apply to VoIP service. *See Implementation of Sections 255 and 251(A)(2) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996*, 16 FCC Rcd. 6417 at ¶ 8 (1999).

³¹*See* 47 U.S.C. § 254.

³²In addition to the assessment methodology, other major unresolved issues include determining how high-cost support is computed; designating “eligible telecommunications carriers”; and reviewing the operations of the schools and libraries program (which the FCC had initially

It is critical that policymakers recognize the need to modify the current universal service contribution mechanism, particularly with respect to VoIP services.³³ Under the current contribution mechanism, assessments are based on *interstate telecommunications* revenues. Applying this mechanism to VoIP service would be fraught with difficulty for several reasons. First, because most consumer VoIP services today are offered without regard to interstate and intrastate distinctions, arbitrary judgments would be required as to which portion of VoIP service revenue is interstate and which is intrastate. Second, because the regulatory classification of VoIP service has not been determined, an arbitrary judgment would be required as to what portion of VoIP revenue is *telecommunications* revenue.

The best solution to this problem would be the adoption of a numbers-based contribution mechanism.³⁴ Any service which makes use of NANP resources would be assessed on a per-number basis (special access and private line services would be assessed in a manner which results in a contribution approximately equal to that of today).³⁵ This is also consistent with the four-prong test previously described. Under such a system there would be no need to distinguish, for universal service purposes, between various types of VoIP offerings. *e.g.*, a voice service with the potential to substitute for a POTS line vs. a gaming service with a voice component. VoIP services that use telephone numbers would be assessed; those that do not use telephone numbers would not. At the same time, VoIP providers must be afforded nondiscriminatory access to universal service support. Any other approach would fail the competitive neutrality principle for universal service and discriminate against otherwise eligible providers based on technology.

Intercarrier Compensation

Similar considerations apply to intercarrier compensation rules. The issue here is not whether the rules should or should not apply but how to reconcile the many different rules—and different prices—that apply to exchanges of traffic.³⁶ Those differences, in turn, dictate not only different prices per unit of traffic, but also which party pays.³⁷ The FCC has a proceeding under way to resolve these issues.³⁸ When that proceeding is concluded and the system has been rationalized, the new rules should apply to VoIP-based services that utilize the PSTN as well.³⁹

Consumer Protection

In addition, generally applicable consumer protection rules that apply to all businesses should apply to VoIP service providers. These include such requirements as “do not call” and “do not mail.” By contrast, as explained below, requirements that were developed to protect consumers from the monopoly utility in a single-provider environment are unnecessary and inappropriate.

Inappropriate Legacy Utility Requirements

VoIP services provided in competition with incumbent utility phone services should *not* be subject to legacy utility requirements designed largely in a monopoly environment. Most such requirements date from the era of a single provider of phone service and are inappropriate for competitors that offer alternatives to the incumbent providers. Legacy utility requirements all impose substantial burdens,

planned to conduct as part of a comprehensive universal service review in 2001, but which has not yet been initiated).

³³ See *Federal-State Joint Board on Universal Service, Report and Order and Second Further Notice of Proposed Rulemaking*, CC Docket No. 96-45, rel. Dec. 13, 2002 (“Second Further Notice”).

³⁴ See Reply Comments of the National Cable & Telecommunications Association in *Second Further Notice*, April 18, 2003.

³⁵ See *AT&T Oct. 22 Ex Parte; Ad Hoc Oct. 3 Ex Parte* in *Federal-State Joint Board on Universal Service*, CC Docket 96-45, Further Notice of Proposed Rulemaking and Report and Order, FCC 02-43, rel. Feb. 26, 2002 (“Contribution Methodology Further Notice”).

³⁶ Today, the exchange of traffic is governed by a hodgepodge of different rules depending, for example, on whether an ILEC is exchanging traffic with a neighboring ILEC, a CLEC, an interexchange carrier (“IXC”), a CMRS provider, or an information service provider, and also depending on whether the traffic is deemed to be “intrastate” or “interstate.”

³⁷ For example, an ILEC handing off a call to a CLEC is required to pay that CLEC, but when an ILEC hands off a call to an IXC, the ILEC receives, rather than pays, compensation.

³⁸ See *Developing a Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, 16 FCC Rcd. 9610 (2001).

³⁹ This proposal presupposes that equitable rules will be established for all classes of entities that exchange traffic. If classification as an interexchange carrier, Internet service provider, etc. triggers differing compensation regimes, then the problems of arbitrage and gamesmanship will be perpetuated. Under the current rules various classes of entities may have an economic incentive to deliver traffic in an uneconomic or inefficient fashion in order to avoid high intercarrier compensation rates.

none of which are justified in the case of competitive facilities-based VoIP services. The provider-subscriber relationship would be better served by consumer protection rules of general applicability, including appropriate disclosure requirements of any limitations of nonessential utility requirements, rather than the full panoply of detailed and cumbersome requirements applied to some public utility providers. In particular, a number of legacy requirements relate to billing, payment, credit and collection and quality of service standards. For example, many states have rules dictating the format and content of customer bills; rules regarding permitted forms of payment, the allocation of partial payments, and in-person payment obligations; and rules regarding call center metrics, installation intervals, and service establishment requirements. This is but a partial list of utility provider requirements that typical competitive entrants should not face.

As competition increases, marketplace forces, rather than prescriptive rules, can address these issues much more effectively—subject to informing potential customers, so they can make judgments about the service. For instance, because of the industry-wide trend (spurred by consumer demand) towards bundled products and services, various legacy utility mandates such as equal access, tariffing, and dialing parity are simply inappropriate, and particularly so where VoIP services are bundled with services which are not subject to such requirements.⁴⁰ VoIP providers may, however, choose to adopt them on a voluntary basis. But, any unnecessary rules will increase costs for VoIP providers and deter investment, delay deployment, and slow the growth of these promising new services. Regulators should make a comprehensive effort to identify and eliminate all such unnecessary rules. This will be an essential element of a successful VoIP policy.

Rights of VoIP Providers

Just as VoIP service providers meeting the four-prong test must accept certain responsibilities, such providers require certain rights. These rights must be available to the provider irrespective of whether the provider's service is ultimately determined to be an "information service," a "telecommunications service," or another type of service. Additionally, granting these rights should not influence the regulatory classification of the VoIP service.

These rights include, but are not limited to: (1) the right to interconnect and efficiently exchange traffic and control signaling with both IP and PSTN entities on a peer-to-peer basis;⁴¹ (2) the right to obtain telephone numbers, including numbers secured through number portability, to assign those numbers to VoIP customers and to have them published in the telephone directories; (3) the right to access the facilities and resources necessary to provide VoIP customers with full and efficient 911/E911 services (e.g., interconnection to incumbent utility E911 selective router switches, and Master Street Address Guide and Automatic Location Identification database uploads); (4) the right to be compensated fairly for terminating traffic delivered from other entities, in accordance with the results of an industry-wide review of payments for traffic termination and origination that specifically addresses VoIP service;⁴² and, (5) the right to non-discriminatory access to universal service support.

Policymakers must also ensure that facilities-based VoIP service providers have the right to use rights-of-way, including pole attachments, ducts, and conduits. Moreover, VoIP services delivered by cable operators will normally be conveyed over pre-existing facilities already attached to poles, located in underground conduits or crossing rights-of-way. Accordingly, policymakers must ensure that cable operators are not subject to additional or incremental assessments and fees when they change the pattern of signaling in their pre-existing physical transmission paths to add VoIP services to their existing video and Internet offerings. In addition to unnecessarily and unjustifiably burdening cable operators' VoIP services, such fees and assessments would put cable operators at a competitive disadvantage vis-à-vis incumbents who usually control such essential facilities, and non-facilities based providers of VoIP services who utilize cable facilities to make their offerings available. In par-

⁴⁰Notions of "equal access" may be inapplicable to (or prevent the offering of) innovative service packages that give a customer a fixed quantity of usage for a set monthly price, and/or where there is no price differentiation between local and long distance calls.

⁴¹Including access to codes needed for network interconnection and traffic exchange with other providers and the PSTN, NPAC databases and capabilities, SS7 interconnection for call management between VoIP calls and the PSTN, and customer service records housed in ILEC/CLEC databases.

⁴²This is an area where it would be sensible for a PUC to await FCC rulings on petitions pending before that body, rather than to make determinations applicable only to intrastate VoIP service traffic, or that might be out of harmony with what Federal regulators ultimately require for interstate VoIP traffic.

ticular, higher pole rates should not be a barrier to entry for facilities-based VoIP providers.⁴³

VII. Regulatory Restraint and Regulatory Classification

As noted, the cable industry's approach to a VoIP regulatory framework is to focus on the responsibilities and rights appropriate for providers meeting the aforementioned four-prong test, rather than focusing on the regulatory classification of those services. But those issues cannot be avoided. NCTA supports the view of FCC Chairman Michael Powell that VoIP services warrant a fresh assessment, from a highly deregulatory perspective. We agree that policymakers should, as Chairman Powell has stated; "build from a blank slate up as opposed to from the myriad of telecommunications regulations down. . . . [I]t is a nasty, entangled litigious exercise to start from a phone company world of regulation and work your way down this way, rather than to try to say, no, this is something new."⁴⁴

Though complex, the challenge of developing an appropriate regulatory framework for new network applications is not entirely new to the FCC. The FCC's decision in the *Second Computer Inquiry (Computer II)*⁴⁵ to eliminate regulation for "enhanced services" and customer premises equipment led to investment and innovation that reverberates more than twenty years later. Likewise, the Commission's decision to forbear from entry and exit regulation as well as tariffing requirements for CMRS⁴⁶ produced similarly salutary results.⁴⁷

Conversely, application of the full panoply of traditional telecommunications regulation would impede deployment of facilities-based VoIP services.⁴⁸ Only in an environment in which the burdens of regulation are kept to a reasonable minimum will potential VoIP providers be in a position to deploy sustainable facilities-based VoIP services quickly and to their full potential. Such an environment enjoys broad gov-

⁴³The FCC has statutory authority to establish an appropriate pole attachment rate for attachments by cable operators. Setting an appropriate rate would be an important part of creating a hospitable environment to encourage the deployment of facilities-based VoIP offerings. See *National Cable Telecommunications Association v. Gulf Power*, 534 U.S. 327 (2002).

⁴⁴See Remarks of FCC Chairman Michael K. Powell at the Meeting of the Technology Advisory Council, at 2 (Oct. 20, 2003). See also Powell VoIP Forum Remarks at 1 ("As one who believes unflinchingly in maintaining an Internet free from government regulation, I believe that IP-based services such as VoIP should evolve in a regulation-free zone. No regulator, either Federal or state, should tread into this area without an absolutely compelling justification for doing so."). The results of this exercise may also produce insights that could also be applied to traditional circuit-switched, facilities-based CLEC services. Clearly, all CLECs lack market power, and sound public policy (as well as the dictates of the 1996 Act) commands that all unnecessary regulation of telecommunications services should be avoided.

⁴⁵See *Amendment of Section 64.702 of the Commission's Rules and Regulations*, Final Decision, 77 FCC 2d 384 at ¶84 (1980) ("Computer II"), *aff'd sum nom. Computer & Comm. Ind. Ass'n v. FCC*, 693 F.2d 198 (1982) (subsequent history omitted). It was *Computer II* that prevented Federal or state regulation of interstate information services. See 77 FCC 2d 384 at ¶7. *Computer II* also ensured the deregulation and competitive provision of customer premises equipment ("CPE"). See *id.* at ¶9.

⁴⁶See *Implementation of Sections 3(N) and 332 of the Communications Act, Regulatory Treatment of Mobile Service*, 9 FCC Rcd. 1411 at ¶¶173-182 (1994) (subsequent history omitted) (forbearing from many Title II requirements, stating that "Congress and the Commission have determined that the public inherently benefits from the promotion of competition among the carriers that results from market-based pricing for their services"). See also *Petition of the People of the State of California and the Public Utilities Commission of the State of California to Retain Regulatory Authority over Intrastate Cellular Service Rates*, Report and Order, 10 FCC Rcd 7486 at ¶¶96-97 (1995) (denying a California PUC petition to extend state regulatory authority over CMRS services). Recognizing that wireless services operate without regard to state boundaries, Congress also preempted state and local rate and entry regulation of CMRS. 47 U.S.C. 332(c)(3).

⁴⁷See *Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Eighth Report, 18 FCC Rcd. 14783 at ¶57 (2003) (noting the results of the deregulatory environment created for wireless carriers by the FCC: "Continued downward price trends, the continued expansion of mobile networks into new and existing markets, high rates of investment, and churn rates of about 30 percent. . . demonstrate a high level of competition for mobile telephone consumers"). This report also noted that wireless subscribership increased in 2002 to over 141 million users in the U.S., see *id.* at ¶59, a tenfold increase in less than a decade.

⁴⁸While it is clear that unnecessary regulation would create a significant business problem for circuit-switched CLECs, the case against excessive Title II regulation of VoIP services is even more compelling. Circuit-switched telephony is an existing service, using proven technologies. By contrast, VoIP service uses nascent technologies that have yet to be deployed on any significant commercial scale, and which could present a host of as-yet-undetermined financial, technical, and operational challenges. As noted above, the development of a minimally regulated environment for VoIP services ought to provide a basis for revisiting—and reducing—the regulatory requirements that apply to traditional circuit-switched, facilities-based CLEC services.

ernmental and industry support.⁴⁹ In this regard, Congress has directed the FCC and the state PUCs to “encourage the deployment on a reasonable and timely basis of advanced telecommunications” by “utilizing . . . regulatory forbearance . . . [and] other regulating methods that remove barriers to investment.”⁵⁰

For the reasons detailed above, public policy strongly and unquestionably favors a pro-competitive, deregulatory approach to facilities-based VoIP services. Fortunately, Federal law and FCC precedents are largely consistent on this point. However, state laws and regulation are varied; as described above, states have taken widely differing approaches to VoIP—ranging from minimal regulation in states such as Florida to attempts to apply full common carrier service regulation in states such as Minnesota. NCTA’s view is that state regulation of VoIP services should be consistent with FCC regulatory treatment. State consistency with Federal regulation is important because an Internet-based service has an interstate (even global) reach; 51 different approaches would make it difficult to develop VoIP service.

And Federal leadership for the states will also prevent a legal logjam where one state regulatory regime, if appealed, becomes law in that region of the country while the rest of the Nation comes to follow the Federal scheme. This anomaly is not theoretical. One panel of the U.S. Court of Appeals for the 9th Circuit ruled that its earlier decision on the regulatory classification of cable modem service—reached before the FCC had made its own regulatory determination—continued to govern. That prior determination held, regardless of the analysis made by the FCC and despite the usual deference owed to expert agencies over just these sorts of policy questions.⁵¹ A premature state decision could lead to a similar unfortunate result in the VoIP policy context.

In considering how to proceed under the Act, both state and Federal regulators would do well to consider the “nascent services doctrine,”⁵² articulated by FCC Commissioner Kathleen Abernathy. It is a set of principles, which, while not a legal mandate, is instructive for policymakers.

This doctrine recommends that regulators exercise restraint when dealing with new technologies and services and to reevaluate the need for any regulation of those technologies and services as they evolve. Such restraint would facilitate the development of facilities-based VoIP services that compete with the established telephone companies without the burden of anachronistic regulations and would promote the goal of enhancing facilities-based local telephone competition.⁵³

The doctrine further suggests that once new facilities-based competitors demonstrate their viability, policymakers and regulators reexamine the overall regu-

⁴⁹Numerous policy leaders (including many in the FCC and in state government), industry representatives and others have recognized the importance of limiting regulation of facilities-based VoIP services. FCC Chairman Michael Powell and FCC Commissioners Martin and Abernathy have called for regulatory restraint with respect to VoIP services. See, e.g., Cable Monitor, *FCC and NTIA Call for Regulatory Protection for VoIP*, Aug. 26, 2002. Similar—if not more strongly deregulatory—statements were made by multiple FCC Commissioners at the FCC’s Dec. 1, 2003 VoIP Forum. Acting NTIA Administrator Michael Gallagher is reported to have said that “any regulation of VoIP should be ‘minimalist and narrowly tailored’ to meet public interest goals” and that excessive regulation could drive providers overseas. See *Communications Daily*, *Powell Sees FCC Focusing on Discrete Issues on VoIP*, at 2 (Dec. 2, 2003) (“*CommDaily Report on VoIP Forum*”).

⁵⁰Pub. L. No. 104–104 § 706, 110 Stat. 56 (1996); see also 47 U.S.C. § 157(a) (establishing Federal policy of encouraging the provision of new technologies and services to the public).

⁵¹See *Brand X Internet Services v. FCC* 345 F.3d 1120 (9th Cir. 2003) (per curiam); *AT&T Corp. v. City of Portland* 216 F.3d 871 (9th Cir. 2000). See also *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984).

⁵²*The Nascent Services Doctrine*, Remarks of FCC Commissioner Kathleen Q. Abernathy Before the Federal Communications Bar Association, New York Chapter (Jul. 11, 2002), available at <http://www.fcc.gov/Speeches/Abernathy/2002/spkqa217.html>.

⁵³In a sense, this is what the Commission did in the *Stevens Report* where, by essentially deciding not to address the regulatory classification of VoIP services, it allowed for five years of technology development, service experimentation, and capital investment. See *Stevens Report*, 13 FCC Rcd. 11501 at ¶¶ 86–93 (1998). Similarly, in the AT&T/TCI Merger and in the first Report to Congress under § 706, the FCC declined to interfere with emerging high-speed cable Internet services, thereby fostering the massive investment that today makes broadband service available to 80 percent of American homes. See *Applications for Consent to Transfer the Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee*, Memorandum Opinion and Order, 14 FCC Rcd. 3160 at ¶ 94 (1999); *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, First Report, 14 FCC Rcd. 2398 at ¶ 106 (1999); National Cable & Telecommunications Association, *Cable & Telecommunications Overview, Mid Year 2003* at 10, at http://www.ncta.com/pdf_files/Mid'03Overview.pdf (stating that 85 million of approximately 106 million U.S. homes had access to cable broadband service at the end of 2002).

latory scheme applicable to incumbent providers in the marketplace to assess whether existing regulations applicable to incumbents should be modified. If appropriate, regulatory schemes over time would be harmonized, but with much less regulation than previously, reflecting the effects of competition.

The focus of the “nascent services doctrine” is not on establishing the appropriate regulatory classification (*i.e.*, whether a VoIP service is a “telecommunications service,” an “information service,” or another type of service), but on how best to allow both facilities-based and non facilities-based VoIP services to develop naturally in the marketplace in response to consumer demand and technological innovation. Applying this doctrine, regulators would avoid those regulations that will unnecessarily hinder the evolution and growth of a new service, and ultimately lessen all regulation as competitive circumstances warrant.

While adherence to the principles of the nascent services doctrine is a worthwhile goal, policymakers must follow such principles within the context of an appropriate statutory framework. Based on the appropriate set of responsibilities and rights, as articulated above, VoIP providers need an approach which either begins with Title I and layers on responsibilities and rights, or begins with Title II and forbears significantly from a number of responsibilities—effectively a Title “1.5.”

More specifically, the FCC and the states can secure a reasonable and minimally regulatory environment for VoIP services through classification of VoIP applications as “information services” under Title I of the Communications Act. An alternative but potentially more problematic approach would be to use the FCC’s “forbearance” and preemption powers under Title II to minimize regulation. Each path is discussed briefly below.

Title I Regulatory Approach

The designation of certain VoIP services as information services—and the use of Title I ancillary authority to impose only those regulations that are essential to helping regulators meet key public health, safety, and other responsibilities—is the primary way in which policymakers could minimize burdens on these emerging services. Since *Computer II*, designation of a service as a Title I information service has meant that it is deregulated, in the sense that it is not subject to common carrier regulation by federal or state regulators.⁵⁴ Even a Title I service, however, can be regulated under the FCC’s “ancillary authority,” but only in furtherance of specific statutory objectives.⁵⁵

A pure Title I approach may be particularly well suited to certain forms of VoIP services that provide capabilities and features that make them markedly different from conventional phone services. Examples of such services may include video phone, voice chat, and video chat services. Depending on their characteristics, however, even VoIP services that more closely resemble conventional telephone offerings may well meet the definitions of an information service. Specifically, VoIP services could be designed in ways that easily satisfy the statutory definition, *i.e.*, “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”⁵⁶ They could even more easily be designed to satisfy the enhanced service definition of *Computer II*, *i.e.*, services “which employ computer processing applications that act on the format, code, protocol or similar aspects of the subscriber’s transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information.”⁵⁷

As noted above, classification of a service as an information service does not necessarily mean that it should be exempt from all regulation. The FCC retains “ancillary authority” under Title I to adopt those regulations that are reasonably necessary to advance explicit statutory objectives.⁵⁸ We have already outlined the social responsibilities appropriate for VoIP providers whose service meets the four-prong test described above, where those responsibilities are associated with certain rights. Significantly, classification of VoIP service under Title I does not mean that those rights could not be conferred on VoIP providers. For example, it is likely that the Commission could order local exchange carriers to interconnect with Title I VoIP providers or even provide unbundled network elements. Prior to 1996, using its Title II authority over local exchange carriers, the FCC ordered the Bells to inter-

⁵⁴ See *Computer II*, 77 FCC 2d 384 at ¶84 (1980).

⁵⁵ See *People of State of Cal. v. F.C.C.*, 905 F.2d 1217, 1241 at n.35 (9th Cir.) (1990).

⁵⁶ 47 U.S.C. § 3(20).

⁵⁷ 47 C.F.R. § 64.702(a).

⁵⁸ See *People of State of Cal. v. F.C.C.*, 905 F.2d 1217, 1241 at n.35 (9th Cir.) (1990).

connect with information service providers in the *Expanded Interconnection*⁵⁹ and *Computer III*⁶⁰ proceedings.

After enactment of the 1996 Act, the Commission sought comment on whether those requirements were still valid and appropriate.⁶¹ As of now, the requirements remain in effect. Nevertheless, it is an open issue whether the 1996 Act, by establishing specific interconnection and unbundling duties of local exchange carriers that are owed only to providers of telecommunications services, precludes the Commission from imposing the same or similar duties on carriers for the benefit of VoIP providers.

NCTA emphasizes that the rights set forth in Section VI *supra* are critical to any VoIP regulatory regime under Title I, including interconnection, eligibility to receive universal support and participation in a sustainable intercarrier compensation regime.

Regulatory Forbearance and Preemption Under Title II

The FCC has (and PUCs may have) considerable authority to decide that even “telecommunications services” need not be subject to various requirements under Title II of the Communications Act. For example, the FCC’s *Competitive Carrier* rulemaking, which scales regulatory responsibilities according to the presence or absence of market power associated with a particular service, allows the FCC to eliminate regulations for entities or classes of providers that have low market shares and no potential to acquire and to wield market power.⁶² Obviously, facilities-based VoIP service providers, newly entering the market, who compete against dominant 100-year-old telephone service providers, *will have little or no ability* to engage in the abuses that full common carrier regulation is designed to prevent.

Building upon the principles of the FCC’s *Competitive Carrier* decision, Congress in the 1996 Act created a mechanism of regulatory restraint that extends not only to FCC-made rules but also to statutory provisions. Under Section 10 of the 1996 Act, the FCC is empowered and required to eliminate *any statutory or regulatory requirement* that applies to any telecommunications service or telecommunications service provider if: (1) the requirement is unnecessary to prevent unfair and unjust charges and practices, (2) enforcement of that requirement is not needed to protect consumers, and (3) forbearance would otherwise serve the public interest.⁶³ VoIP services offered by new entrants, especially in their initial phases, are ripe for Section 10 forbearance. Such regulatory restraint is essential to promote investment, innovation, and widespread deployment.

The FCC followed this line of reasoning in its cable modem Declaratory Ruling and NPRM. There it said that “to the extent cable modem service is classified as a telecommunications service [in the 9th circuit] . . . forbearance would be in the public interest because cable modem service is still in its early stages; supply and demand are still evolving; and several rival[s] . . . are still developing. For these same reasons [the Commission] tentatively conclude[s] that enforcement of Title II provisions and common carrier regulation is not necessary for the protection of consumers or to ensure that rates are just and reasonable and not unjustly or unreasonably discriminatory. As such, [the Commission] believe[s] that forbearance from the requirements of Title II and common carrier regulation is appropriate in this circumstance.”⁶⁴

⁵⁹ *Expanded Interconnection Order*, 7 FCC Rcd 7369, ¶ 65 (1992).

⁶⁰ *Computer III Phase I Order*, 104 FCC2d 958 ¶ 113 (1986); *Computer III Further Remand Proceeding*, 10 FCC Rcd 8630 ¶¶ 18–19 (1995).

⁶¹ *Computer III Further Remand Proceeding*, Notice of Proposed Rulemaking, 13 FCC Rcd 6040 (1998); Request to Refresh the Record, 16 FCC Rcd 5363 (2001).

⁶² See *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, First Report and Order, 85 FCC 2d 1 at ¶ 4 (1980) (“*Competitive Carrier*”). See also *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, Fifth Report and Order, 98 FCC 2d 1191 at ¶¶ 19–23 (1984) (forbearing from most regulation of nationwide common carrier digital transmission networks (“DEMS”), holding that forbearance will help promote the entry and expansion of DEMS by relieving carriers of the costs and delay of required tariff filings and will help promote competition).

⁶³ See 47 U.S.C. § 160(a). Some parties have sought Section 10 forbearance under the 1996 Act. See e.g., *CTIA Petition for Forbearance from Section 310(d) Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving Telecommunications Carriers*, 11 C.R. 61 (1998), *Forbearance From Applying Provisions of the Communications Act to Wireless Telecommunications Carriers*, 21 C.R. 802 (2000).

⁶⁴ See *Inquiry Concerning High Speed Access to the Internet over Cable and Other Facilities, Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities*, FCC N Dkt. Nos. 00–185, 02–52 Declaratory Ruling and Notice of Proposed Rulemaking, at ¶ 95 (rel. Mar. 15, 2002)

There are several observations about “forbearance” worth noting. First, this approach ordinarily presumes that Title II requirements and rules apply in the first instance, and then eliminates them one (or a few) at a time. A more flexible and deregulatory approach might couple the notion of forbearance with the “nascent services doctrine” so as to identify only the Title II requirements appropriate to VoIP and forbear from the rest in accordance with the standards of Section 10. Such an approach would ensure that VoIP services are never subject to the full panoply of Title II-type regulations, but rather are subject, from the outset, only to those regulatory obligations that have been affirmatively determined to be necessary.

Second, forbearance can be slow; at the Federal level, telecommunications service providers must apply for forbearance, either individually or as a class, and the FCC may take up to 15 months (during which time regulation continues) before a final decision is rendered.⁶⁵ This problem can be solved if the FCC takes action promptly, through its contemplated NPRM⁶⁶ and through other appropriate steps to provide a measure of regulatory certainty for VoIP services.

Third, FCC forbearance standing alone operates only to curtail interstate regulation but does nothing to address excessive and inconsistent *intrastate* phone regulations.⁶⁷ Two solutions to this problem are apparent. One is for PUCs to embrace a light-handed regulatory approach and ensure that any state regulation of VoIP services is consistent with FCC regulatory treatment. Failing that, the other solution is for the FCC to use its preemption powers to constrain state action. Indeed, a determination under Title I that VoIP is an interstate information service would preempt states by definition. If VoIP is classified as a telecommunications service under Title II, then Section 253 requires the FCC to preempt state laws, regulations, and rules that prohibit or have the effect of prohibiting any entity from providing such services.⁶⁸ More broadly, the FCC has preexisting preemption powers, resident in Sections 1, 2, and 4(i) of the 1996 Act, to preempt state regulations that impede the provision of interstate communications services.

Given the range of possible paths to a suitably deregulatory regime, there appears to be every reason for Federal and state policymakers to embrace a minimally regulatory regime for VoIP services, so that vast numbers of residential consumers will enjoy the benefits of competition, new and exciting services will be introduced, and new investment and jobs will be stimulated. Only a regulatory framework that is minimally burdensome can create the right incentives and a favorable climate in which service providers can invest, innovate, and deploy VoIP services.

Conclusion

Cable’s massive investment since the 1996 Act has enabled the industry to offer a host of new services. These services include high-speed Internet access, digital cable, HDTV and video-on demand. Several cable companies also have substantial circuit-switched telephony operations. VoIP, however, is more than just the next new application. The cable industry believes that VoIP technology will permit cable companies to provide innovative, high-value facilities-based residential local phone services at competitive prices across the U.S. Such services, especially offered by facilities-based providers like cable competitors, hold the promise of breaking the logjam that has long denied consumers the benefits of real and sustainable competition and choices for local telephone service. While cable companies are excited about the potential benefits that can result from the widespread availability of VoIP services, a broad rollout cannot be assured unless a (de)regulatory framework applies to these services.

If policymakers affirmatively embrace and promote VoIP services, and keep them free of unnecessary and inconsistent regulation, the result will be to attract additional investment and propel rapid and ubiquitous deployment. This is the lesson to be drawn from the broadband explosion since the 1996 Act: pro-competitive, deregulatory policies work as nearly 18 million cable modem customers bear witness. Conversely, public benefits will inevitably be reduced and delayed if unnecessarily restrictive regulations from the monopoly telephone era are applied. The choice is clear.

⁶⁵ See 47 U.S.C. § 160(a).

⁶⁶ See XChange, *FCC to Open Proceedings on VoIP Regulation*, Nov. 7, 2003 (citing a letter from FCC Chairman Michael Powell to U.S. Senator Ron Wyden, in which Powell stated that: “Over the course of the next year, after full public comment and thoughtful consideration of the record, the FCC plans to follow up . . . [an] NPRM with a report and order on the VoIP issues raised in the proceeding.”).

⁶⁷ But note that a number of state public utility commissions also operate under laws that allow for the exercise of regulatory forbearance.

⁶⁸ See 47 U.S.C. § 253.

The CHAIRMAN. Thank you very much.

Mr. Post?

I'm sorry, Senator?

Senator BREAUX. Mr. Chairman, I just want to also comment on one of our witnesses, Glen Post, with CenturyTelephone, who is headquartered in Louisiana. They serve about 22 states, I guess, now in rural telephone services, and we're real proud of the contribution they've made, and glad to have them as a witness.

The CHAIRMAN. You're not responsible for the Mardi Gras being streamed over the Internet?

[Laughter.]

Mr. POST. We had nothing to do with that, thank you.

The CHAIRMAN. Thank you.

Welcome.

**STATEMENT OF GLEN POST, CHIEF EXECUTIVE OFFICER AND
CHAIRMAN OF THE BOARD, CENTURYTEL**

Mr. POST. Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you today.

CenturyTel is a leading provider of telecommunications services in rural communities in 22 states, as Mr. Breaux has just pointed out. Many of our service territories are represented by Members of this Committee, including Louisiana, Mississippi, Montana, Nevada, Oregon, Texas, and Washington State. Our principal business focus is providing high-quality long-distance, Internet, broadband, and advanced services to rural and small urban markets. The majority of our three million customers and 7,000 employees live and work in the very areas we believe have the most critical stake in the issues we will discuss today.

Mr. Chairman, technology and market forces are driving our industry faster than regulations have been able to adapt. Voice over Internet protocol is an exciting new service that signals the way our country communicates. It is becoming increasingly varied, and the pace of change will accelerate even more.

It is an exciting time in our country's telecommunications development, but also a time of great uncertainty for the country's local phone companies and their investors. Our ability to invest in our network and bring high-quality services to our customers is now controlled, to a great degree, by increasingly volatile regulatory decisions, an outdated regulatory environment that no longer reflects reality, and government-managed competition whose rules are unevenly applied to market participants.

Lost in the avalanche of news stories and advertisement by those promoting voice over IP technology is one critical but seldom mentioned fact. Voice over IP service providers cannot deliver their services without utilizing and relying upon someone else's network. Their ability to compete depends, in large part, on the network in which we have invested to make broadband connections available to rural America. They do not concern themselves with the capital-intensive task of building and maintaining a broadband-capable network that universally serves all customers.

I believe the discussions about voice over IP cannot take place in a vacuum. We cannot discuss voice over IP without also talking about universal service, intercarrier compensation, competition,

public safety, and how the promised benefits of broadband-based services such as voice over IP can become a reality for all consumers.

Regarding intercarrier compensation, access charges are nothing more than legally required payments for use of another carrier's network. They play a critical role in keeping local rates affordable and encouraging investment in the telecommunications infrastructure that plays a huge role in our national economy. At their foundation is the commonsense recognition that all customers benefit when all customers are connected to the public switched telephone network.

Certain petitions now before the FCC would lead us to believe that injecting the words "Voice over IP" or "Internet" into the description of a voice service magically changes the nature of that service. AT&T's petition to have its traditional long-distance service be exempt from access charges because it contains a small IP component is alarming. AT&T is not offering a new product or service, yet AT&T seeks to avoid paying a legitimate cost for use of phone company loops and switches, and shows no regard for the need to protect consumers or maintain much needed stability in the industry.

The truth is, nothing changes in our network when voice over IP or other IP-based services travel across it. Today, we originate, transport, or terminate voice over IP calls, sometimes all three, so that two or more people can have a voice conversation on telephones just like the ones you have in your homes and offices today.

Vonage, Level 3, and long-distance companies such as AT&T should not be allowed to unilaterally exempt themselves from access payments. There is no consumer benefit, and the granting of the petition is not in the public interest.

The question that we must ask ourselves is whether voice over IP will bridge the digital divide between rural and urban America, or make it wider. If the universal service issues surrounding voice over IP are not properly addressed, it will be the latter. For this reason, there is no question in my mind that all voice service providers, including voice over IP providers, such as *Pulver.com* and Vonage, must contribute to universal service funding.

The availability of affordable telecommunications services has long been a cornerstone of our Nation's telecommunications policy. It is the principle that makes our telecommunications network one of our most valuable national assets, and it is a significant factor in the economic and social development of our Nation. We must not allow the hype surrounding this promising new technology to distract us from this important policy principle. All service providers must contribute to universal service to help make services available and affordable for all.

The government has an important role to play in making sure certain public-interest objectives are met, including universal service, 911, carrier-of-last-resort obligations, and law enforcement access. Some regulators have already discussed applying a light touch when it comes to regulating voice over IP. But if a light touch means no social or economic responsibility, I fear such an approach will, in time, undermine the high-quality service and near ubiq-

uitous deployment that this country has worked long and hard to achieve.

There is no downside for consumers if all providers shoulder responsibility for supporting the network, assume law enforcement and national security responsibilities, comply with 911 requirements, and adhere to disabilities access obligations.

Voice over IP is an exciting technology that highlights the need for a broad revisiting of the Nation's communications policy. We need to move beyond government-managed competition that rewards those who make no network investment while handcuffing those who do.

In conclusion, how you and the FCC proceed has critical implications to the long-term future of this Nation's telecommunications infrastructure and our ability to keep pace with the rest of the world. Our efforts in creating new policies today are, indeed, necessary, but we should seek to avoid unintended negative consequences for consumers of tomorrow as we open this new chapter in telecommunications history.

Voice over IP must be considered in the broader context of all the fundamental changes that are underway in the new telecommunications marketplace, and reform must take place for the rules governing all competitors today. If nothing else, voice over IP accelerates the need for universal service reform and free market competition. Hopefully, today's hearing will advance that effort.

I appreciate the opportunity to discuss these important issues with you today, and look forward to your questions.

[The prepared statement of Mr. Post follows:]

PREPARED STATEMENT OF GLEN POST, CHIEF EXECUTIVE OFFICER
AND CHAIRMAN OF THE BOARD, CENTURYTEL

EXECUTIVE SUMMARY

Introduction

CenturyTel is a leading provider of telecommunications services in rural communities in 22 states. Many of our service territories are represented by members of this committee, including Louisiana, Mississippi, Montana, Nevada, Oregon, Texas and Washington State. Our principal business focus is providing high quality telephone, long distance, Internet, broadband and advanced services in rural and small urban markets. We also use IP technology in our network today, and offer IP-based voice services to small business and enterprise customers. The majority of our three million customers and 7,000 employees live and work in the very areas that we believe have the most critical stake in the issues we will discuss today.

Voice Over Internet Protocol—The Most Recent Sign that the Telecommunications World is Changing

Technology and market forces are driving our industry faster than regulations have been able to adapt. Voice Over Internet Protocol is an exciting new service that signals that the way our country communicates is becoming increasingly varied and that the pace of change will accelerate even more. It is an exciting time in our country's telecommunications development, but also a time of great uncertainty for the country's local phone companies and their investors. Our ability to invest in our network and bring high quality services to our customers is now controlled to a great degree by increasingly volatile regulatory decisions, an out-dated regulatory environment that no longer reflects reality, and government-managed competition whose rules are unevenly applied to market participants.

The Facts About Rural Markets and Voice Over IP

We have all heard plenty about Voice Over IP in the last few months. But lost in the avalanche of news stories and advertisements by those promoting the technology is one *critical*, but seldom-mentioned fact: VoIP service providers cannot de-

liver their services without utilizing and relying upon someone else's network. Their ability to compete depends in large part on the network in which we have invested to make broadband connections available to rural America. They do not concern themselves with the capital-intensive task of building and maintaining a broadband-capable network that universally serves all customers. We cannot lose sight of this fact as we consider the effect that the regulatory treatment of VoIP will have on the continued availability of telecommunications service in all markets.

The Important Role of Intercarrier Compensation

Intercarrier compensation issues must be addressed in the VoIP debate. Access charges are nothing more than legally required payments for use of another carrier's network. They play a critical role in keeping local rates affordable, encouraging investment in the telecommunications infrastructure investment that drives a huge portion of our national economy and promoting interconnection between carriers. At their foundation is common sense recognition that *all* customers benefit when *all* customers are connected to the *public* switched telephone network. In order for all customers to be connected, carriers must compensate each other fairly, and end-user rates must be affordable.

A Commitment to Universal Service

The question that we must ask ourselves is whether VoIP will bridge the digital divide between rural and urban America, or make it wider? If the universal service issues surrounding VoIP are not properly addressed, it will be the latter.

Our country's commitment to universal service must be renewed and strengthened. Without it, customers who live in rural areas face the real risk of being left behind as our Nation's communications network continues to evolve. For this reason, there is no question in my mind that all voice service providers, including VoIP providers such as Pulver.com and Vonage must contribute to universal service funding.

The Government's Role in Preserving Key Social Objectives

Some regulators already have discussed applying "a light touch" when it comes to regulating VoIP. But, should a "light touch" mean no social or economic responsibility? I fear such an approach not only will subject consumers to second-class service—such as no E-911, or access for people with disabilities. But even more troubling, it will in time undermine the high quality service and near-ubiquitous deployment that this country has worked long and hard to achieve—service and coverage that is the envy of other nations.

From a consumer standpoint, there is nothing wrong with demanding some level of accountability from all providers. There is no downside for consumers if all providers shoulder their fair share for supporting the network, assume law enforcement and national security responsibilities, and comply with 911 requirements, numbering resource conservation, and disabilities access obligations.

Consumers Deserve a Robust Market Where ALL Competitors Can Compete Freely

Voice Over IP is an exciting technology that highlights the need for a broad revisiting of the Nation's communications policy. We need to move beyond government-managed competition that rewards those who make no network investment while handcuffing those who do. We should allow the local phone companies to bring our longstanding commitment to the community, to innovation, and to customer service to the 21st century communications marketplace. State and Federal policy makers must understand that a new world brings new challenges, such as encouraging infrastructure investment in an uncertain environment, and preserving important social objectives such as universal service, emergency services, and access for law enforcement.

Conclusion

VoIP must be considered in the broader context of all the fundamental changes that are underway in the new telecommunications marketplace—and reform must take place for the rules governing all competitors today. Hopefully, today's hearing will advance that effort.

The CHAIRMAN. Thank you very much, Mr. Post.

Mr. Wise, most witnesses and some Members of this Committee have expressed strong reservations about applying state regulation to VoIP. In fact, Mr. Citron says that state regulation carries seri-

ous consequences—there are other very serious concerns raised about state regulation. Do you have any response to that?

Mr. WISE. Yes, Senator. Yes, there's no question, at this point, that the majority of the states in this country have applied this so-called light touch that we've all been looking at. It is not the intent of the state commissions to stifle this exciting new technology, and that it truly could be the vanguard of the new wave of telecommunications.

But it is telecommunications. And to the extent that it touches the network, they should have obligations for the public service. And unless you want to see a dramatic swing to some of these high-cost rural areas, dramatically see phone bills rise, then there should be a clear and concise message that the FCC and this body sends about the public interest and what's going to happen to rural telephone rates.

The CHAIRMAN. But, Mr. Wise, well-diggers dig wells, and regulators regulate.

Mr. WISE. That is the curse of my last 9 years as a regulator, and I find it very difficult, at times, to mix my role as a regulator with my own personal sentiment. But my obligation, even though flawed, under what—as you said, about the telecom act, but my job is to facilitate competition in our state, and we've done so. And so as much as I can—and I think many of the states agree with you that it is our role to protect that consumer, that person that pays the bill and is the first to pick up the phone and to speak to me and tell me their story of poor service, of customer choice, and the like. And so that I really hope that we don't have that so-called patchwork of regulation around the country, and that's why I commend this body for addressing this issue early in the debate.

The CHAIRMAN. Thank you.

Mr. Werbach, what's your comment on that issue?

Mr. WERBACH. I think, Senator, you've raised an important point. And the trouble is, the regulatory structures that we have, have been built up over a hundred years based on a traditional kind of network, based on the idea that, for example, a telecommunications network was one thing, and a broadcast network that sent video was something else. Well, now, with the Internet, with voice and other real-time services as applications, again, there is just one network, and applications on top of it. So when regulators try and get involved at every level, piecemeal, when, as Senator Wyden said, every jurisdiction throughout the country can potentially get a piece of a service as long as it touches the network somewhere, we wind up potentially with a very confusing situation and a situation which just inherently limits the growth of new services and limits the kind of innovation and competition that we all want to see.

The CHAIRMAN. Do you believe that the Commission may have to impose network neutrality requirements on broadband providers?

Mr. WERBACH. I think, you know, Chairman Powell, you know, as he said in his speech a couple of weeks ago, rightly highlighted the importance of what he called Net freedom, the idea that—if you look at the history of the Internet, the Internet is a success story of the FCC imposing pro-competitive safeguards on the underlying

infrastructure, which historically was the telephone network, so that it didn't have to regulate what came on top, it didn't have to regulate Internet service providers, it didn't have to regulate application providers because the network was open.

So I think it's a very legitimate concern to ensure, as we move into this broadband world, as we move into this world of new kinds of applications, like VoIP, that we ensure that that openness takes place.

Now, specifically whether we need to impose new rules today, whether the FCC needs to impose new rules, I think is an issue the commission needs to take on, take a look at, look at what's happening in the market, and define specifically what sorts of tests would be needed to ensure that the network is truly open.

The CHAIRMAN. Mr. Britt, as we all know, *USA Today* reported, "Comcast, the Nation's largest cable operator, will boost average cable rates by 5.4 percent. Time Warner Cable will raise average rates by 4.9 percent," on and on. As you know, increases in cable rates have been a very important issue before this Committee, but, more importantly, before the American people.

You state, in your written testimony, VoIP technology allows cable operators to use these new broadband networks to offer subscribers high-quality reliable local and long-distance telephony service, and that Time Warner Cable plans to offer VoIP services throughout the majority of its cable footprint by year-end.

Can consumers expect to see a corresponding decrease in their cable rates since the entire cost of this network will no longer need to be borne by cable subscribers alone?

Mr. BRITT. Mr. Chairman, we actually provide a large number of services now that would fill a long list of—sheet of paper.

The CHAIRMAN. None of those have been cause to see a reduction in your increase in cable rates, though.

Mr. BRITT. I will address that in a second. All of them are priced at different levels. One of the things I worry about every day is doing a lot of market research, determining what the right prices for the different services are, in light of competition, because we have competition for each of our services, and then figuring out the best way to offer that to the market to get the most number of people to buy our services.

Many of our prices for services have not changed for several years. We've been in the Internet-access business for 7 years, and changed our price once. Pay television prices have actually come down over the last 10 years. So there is one particular—one of our offerings that was a business we were in 30 years ago, it was our only business then, and that particular price has gone up. But when you look at the average price that our customers are paying, that has not gone up nearly as fast as that one number.

The CHAIRMAN. Well, my time is expired. I'm sure that's of very little comfort to the majority of your subscribers who don't have other services but continue to see their cable rates go up in dramatic fashion.

I think Mr. Wise would agree that that's a matter of concern to his constituents. Is that correct, Mr. Wise?

Mr. WISE. Yes, sir. And certainly competitive choices don't always give us lower prices. It might just give us the correct price.

And certainly that's what we see from unfettered and uncontrolled companies in this marketplace.

The CHAIRMAN. And I question your comment about where competition lies, but that'll be the subject of another hearing, and we thank you for being here today on this issue.

Senator Cantwell?

Senator CANTWELL. Thank you, Mr. Chairman.

Mr. Citron, Mr. Post made a comment about some of the new arrivals in this area of Internet telephony may not be making network investments. Do you think you're making network investments?

Mr. CITRON. Oh, absolutely—we do. First, Vonage is not a traditional facilities-based carrier. We spent, you know, over \$10 million in buying of telecom equipment to place on top of the underlying telecommunications infrastructure, the services that we use today. Of course, we purchased that infrastructure.

One of the great stories for the CLEC industry is, Vonage has been purchasing a tremendous amount of capacity from the CLECs in order to interconnect back into the existing PSTN. At the same time, we are buying plenty of bandwidth, IP, from next-generation networks in order to transport our calls over the Internet. So there are a lot of investments going on, both by us and by our partners.

Senator CANTWELL. So, Mr. Werbach, in your testimony, you kind of hit the head—I apologize for having to attend another hearing on why we should pass standalone legislation on getting reliability standards for our electricity grid, I'm sure something that everybody would appreciate here, something we need to do to make sure we have reliable services. So I apologize for not being present at your testimony, but I have most of your testimony in front of me.

And on this particular point, Mr. Werbach, you're pretty clear in kind of debunking the access-charge issue. I mean, I think that's really what people are saying, is that somehow these people aren't making investments in this legacy technology—and that's right, they're not, to certain degrees. But, as Mr. Citron just said, he's paying for certain things. So how do we further debunk this issue about access?

Mr. WERBACH. Well, you know, Senator, I think you've brought up a good point, that there's a lot of mythology around here. And we need to understand, when we're discussing important issues, like universal service, that sometimes things get labeled as just, "That's universal service." And when you actually peel back the onion, it's much more complicated than that.

Access charges, you know, I think, by universal agreement, are a system that needs to be reformed, and they're not the only system for intercarrier compensation, they're not the only way that companies that use networks or hand off traffic pay for that.

Senator CANTWELL. Explain what that means to the consumer, because what you just said is a pretty big statement.

Mr. WERBACH. What what piece means to the consumer?

Senator CANTWELL. Basically, you're saying, "Why should consumers of the future, with new technology, be tied to the business models of legacy technology?" Isn't that correct?

Mr. WERBACH. Essentially. I mean, IP is the future of the network. That's going to happen regardless of what the regulatory environment is. However, applying traditional rules, applying charges and regulations, that were designed with the network of the 1950s or 1970s or even early 1990s in mind, will retard that transition.

So certainly, you know, the idea that there's a technology of IP and voice over IP that's more efficient, that provides more choice, and that can pay for network connectivity as an application that rides on top of infrastructure, that has tremendous benefits for consumers. And I think, you know, Chairman Powell and some of the other witnesses have illustrated some of them.

I think the problem is, trying to force that technology back into the traditional box and force it to pay into these inflated non-cost-based access charges, which, you know, are applied to certain kinds of traffic and not other traffic, will only harm consumers by preventing the kind of benefits we want to see from being realized.

Senator CANTWELL. Thank you.

Mr. Britt, the Chairman asked a question about your services, moving forward. In general, I would assume that most broadband carriers who are delivering access to homes today and digital choices in the future would love to bundle this service as a complete package to consumers. Do you think that you should offer access to competitors onto your broadband network? Do you see working with Mr. Citron in the future on offering that package?

Mr. BRITT. The interesting thing about this technology is that Mr. Citron can offer his service whether we do something together cooperatively or not. I'm sure that we have people on our cable networks today that subscribe to Vonage, just—actually, I don't know that we do, but I assume we do, because there's no way for me to know whether we do or not. And I think that's what this technology is about, the idea that Mr. Citron can offer this as an application that rides over our broadband network, and that can exist whether we do anything or not. That doesn't preclude our working together for marketing or some other business relationship if that makes sense to both of us.

Senator CANTWELL. So you don't think there is a place in the future for things like most-favored-nation clauses, where you drive down—where you basically give your entire broadband network over to one carrier?

Mr. BRITT. I don't foresee that at the moment. I think we're in a very early stage of lots of new ideas, lots of competing business models. In a sense, what Mr. Citron is doing is competing with what we're doing, really with a different model. And I think as time goes by, the consumer will vote with his or her dollars, and we'll see how this all evolves.

Senator CANTWELL. Mr. Citron, isn't your major concern really not the existing telecommunication companies, but the broadband carriers, who are major players, with fat pipes into lots of households, who are now going to bundle this service and, as the Chairman said, maybe not give us any discount on our current service, but having consumers pay more, and closing you out of opportunity?

Mr. CITRON. Sure. Let me address the points separately.

First, you know, Vonage has to maintain backward compatibility with existing PSTN, so clearly we have concerns in that area, in terms of accessing—in getting access to facilities.

But in regards to competing with Time Warner, per se, I will tell you, factually, that, yes, there are lots of Time Warner customers who use the Vonage service. And every single day, people that have Time Warner cable call Vonage up, asking to get Vonage's service. In doing so, we point them in the direction of Time Warner's Roadrunner Cable offering. And, therefore, those customers go and sign up for those services. So, in one sense, Vonage is really benefiting—you know, Time Warner's really benefiting from Vonage's deployment in signing up customers to broadband. But, at the same time, Vonage is going ahead and competing head on with Time Warner for customers at the application layer.

The only concern Vonage would have in the future is, sort of, around the area of neutrality on bits, themselves. Today, I think that Chairman Powell pointed out, very correctly, we've not seen anyone going ahead and favoring one bit over another bit. But, in the future, that's a possibility. And so we urge this panel and this Congress to take a look at that issue and to make necessary changes where appropriate.

Senator CANTWELL. Is your standard open, or proprietary?

Mr. CITRON. Our standard is open. Just to clarify, SIP is an open standard. It is recognized internationally. And Vonage today is already developing an open platform to allow other networks to connect with us. To this regard, we're currently in the interoperability testing phase with, for example, Free World Dial-up, a service done by Pulver, to allow them to interconnect with us. But as part of that interoperability testing, Vonage will be making public a server to anyone who has access to that can send calls to our customers, so our customers can choose to receive those calls from them in order to protect our customers' privacy.

Senator CANTWELL. I know my time is up, but do you think that that's what everybody in the business is going to do?

Mr. CITRON. I think, over time, they will. The nice thing, though, is that because we issue our customers phone numbers that are e-dot 164 numbers, there's always a mechanism to go find that customer. I think there are economic incentives for us to peer with other networks directly so we can bypass legacy infrastructure, and, thus, reduce the cost of both our services. So I think the marketplace will really deal with that, for the most part.

Senator CANTWELL. Thank you.

Senator BREAUX. [presiding]. I'd like to thank all the panel members.

Mr. Britt, you said that digital phone, which Time Warner provides, feels just like conventional telephone service. Is it as good as conventional telephone service, in your opinion, now?

Mr. BRITT. Yes, I believe our customers think—they tell us they think it's just as good.

Senator BREAUX. So you think that you really have true facilities-based competition with your new digital phone type of system.

Mr. BRITT. Yes, that's true.

Senator BREAUX. Do you have any comment on Chairman Powell's, I think, expression—I don't want to put words in his mouth—

about the wisdom of reopening the 1996 Act with regard to the Section 251 requirements that traditional telephone companies have?

Mr. BRITT. It's a little beyond my expertise, but I do think there's a lot of existing regulation that needs to be re-examined in light of this new competition.

Senator BREAUX. I take it you all contribute to the universal fund at Time Warner. Do the other—do you?

Mr. BRITT. Yes, we do.

Senator BREAUX. Do you know if the other cable Internet providers, voice over Internet providers, contribute, as well?

Mr. BRITT. I don't know that for a fact. I think a number of them are, but, potentially, some aren't.

Senator BREAUX. I guess, Mr. Post, do you have any comments on what I was exploring earlier on? Because it seemed to me that the 1996 Act was, as Chairman Powell indicated, that we provided a subsidy or assistance to get others started in this business to provide this competition. It seems to me that Mr. Britt is indicating that their service is just as good, and probably, may argue, better. He certainly has the capacity to provide, in addition to telephone service, video service, and that wire is already in the house. It seems to me that the phone companies are still following 251 to help these competitors get up and started, and it looks like they're doing pretty good at it. Do you have any comment?

Mr. POST. Yes. We believe that competition is in the networks and in our markets across the country today, with cable companies, wireless competition, Internet-based competition today. So competition is widespread. There is a need for our companies, telephone companies, to be unleashed from many of these regulations that are in place to day. We want a level playing field. We don't want—we're not asking for compensation, a new compensation—just compensation for folks who use our network, and when we talk about the voice over IP.

Senator BREAUX. Well, you benefit from universal service fund to go out into rural areas. If Mr. Britt, through the cable, goes out into a rural area, should he participate in that fund, as well?

Mr. POST. Yes. To the extent that they utilize a network to reach rural America—or have the same requirements or obligations that we have for serving all the customers in a certain area, then that—quality requirements—then there's no reason they should not participate.

Senator BREAUX. Do any of the other witnesses have a comment on the wisdom, or lack thereof, of—I think Mr. Powell suggested it; I would agree with—of re-looking at the 1996 requirements, in terms of Section 251, because of the advent of the new competitive facilities-based competition that's now in place? Anybody else have a comment on that? You don't have to. I'm just asking.

Mr. WERBACH. Well, I would just add, I think, Senator, that that—that's a reason to re-examine the 1996 Act, but also the technological change is an independent reason, that basically the world looks very different today than it did then, and it's going to look much, much more different a few years down the road.

Senator BREAUX. OK.

OK, thank you, gentlemen, very much. Now I'll recognize Senator Nelson.

You go ahead and close it up when you finish, Bill.

**STATEMENT OF HON. BILL NELSON,
U.S. SENATOR FROM FLORIDA**

Senator NELSON. [presiding]. OK. And, Mr. Chairman—that kind of sounds nice, doesn't it?

Senator BREAUX. I'm turning it over to you now.

[Laughter.]

Senator NELSON. I have been elsewhere, dealing with this little crisis we have down in Haiti right now, so some of these questions may have been already addressed. And if so, if you will just tell me.

For Mr. Werbach, how successful do you think VoIP will be in attracting customers and rivaling the traditional phone service?

Mr. WERBACH. To the first part, I think everywhere we go and look around the world, we see that VoIP is a killer app, if not the killer app, for broadband. I mean, we talk, in this country, about a hundred or two-hundred-thousand voice over broadband subscribers today. In Japan, there are three million voice over broadband subscribers. People like to talk to one another. People like to engage in not just traditional phone service, but videoconferencing, the ability to connect to many people at once, the kinds of services that we see with instant messaging.

But what that means is that VoIP functionality may attract customers, but to something that's not necessarily the same as traditional phone service. It may let you talk at a distance, but we shouldn't assume that just because it does that, it's the same as the existing kinds of service that have been regulated for a hundred years. I mean, you shouldn't regulate me as a phone company just because I have a tie that has a telephone on it. And I think that's the issue that really needs to be addressed here. Because it's easy to just assume that it lets you talk over a network, and, therefore, it's a phone service; but, in reality, it's a totally different animal.

Senator NELSON. Mr. Wise?

Mr. WISE. Yes, sir.

Senator NELSON. How might the regulation of VoIP benefit and harm states on such things as revenues, consumer issues, and universal service?

Mr. WISE. Yes, sir, that is certainly one of the issues in the public interest that we've taken on, is the issues that need to be addressed by this body and by the FCC. Certainly, there are huge amounts of monies that go to—and as much as we might not like the word—the “subsidy” of the rural customer, and it would be a substantial cost shift to these rural customers if, in the hard light of reality, that there was absolutely no fees of universal service or access charges applied to these people that are touching the network.

And so I'll be a proponent all day of this new technology, and I believe that many of the state commissions are, as well. But it is vital that we address these issues in the public interest.

Senator NELSON. So you like to see the Congress get into this and provide for some kind of VoIP regulation.

Mr. WISE. Well, certainly, that minimizes the chance of disruption and heavy-handed regulation, and it is something that the Congress should be aware of as these new technologies emerge, and the impact on the law. And our role, at the state commissions, are to apply the law as written, whether it comes from our states or from this Congress.

Senator NELSON. Mr. Post, have you all already talked about how VoIP may harm or help rural telephone service?

Mr. POST. Not specifically. Voice over IP is, of course, just a technology using the IP backbone. I believe that the IP network—voice over IP service will continue to grow. Our company expects to migrate to voice over IP over time. The real benefit there is combining data management and voice over the same network, which can reduce costs to consumers.

Our concern is that companies today—the voice over IP providers today are not paying access use of the network that we own and have invested in. And we think that if that continues, obviously all voice carriers are going to move to voice over IP, there'll be no access charges, and the impact on rural America, on the consumers in rural America, would be huge. On average, \$25 per customer access at CenturyTel, and up to \$60 in the more rural areas, on a per-customer basis.

Senator NELSON. Mr. Vonage—

[Laughter.]

Senator NELSON. Oh, he's not here. OK, who'd like to take this one?

Mr. CITRON. I'm here. Mr. Citron, Senator.

Senator NELSON. Oh, Citron, all right.

Mr. CITRON. That's OK.

Senator NELSON. Tell me how technically feasible and how expensive would it be to equip your service to allow appropriate and legal law enforcement surveillance of Internet phone calls?

Mr. CITRON. Sure, Senator. Today, first, let me remind you, since you weren't here earlier, that Vonage already complies with subpoenas for information requests from virtually most governmental agencies, both local and Federal, for information regarding the calling patterns of our customers and billing information. Today, we're currently already working with the FBI to explore ways of creating a technical standard to go ahead and intercept those calls.

It is technically feasible. It is doable. But because voice over IP is so different at the application layer, where it doesn't ride on physical facilities, like Time Warner, or it could be—you could be at a Starbucks, or you can be here at Congress or in the Four Seasons Hotel or back at your home, those kind of interoperability elements have to be discussed and designed. We think there will be expense involved, but we think the industry can bear the expense.

Senator NELSON. Any of you have any comments on the ease of transition for a senior citizen with regard to this new technology and being able to use it, or to have alternative service? Any comment there?

Mr. BRITT. Senator, I would say that our—the service we have launched actually doesn't look any different than the phone service that a consumer has today, other than it's a different price. So,

really, for a senior citizen or anyone else, there's really no adjustment to be made.

Senator NELSON. So they'd just pick up a phone receiver and proceed.

Mr. BRITT. Exactly. They use the same phone they have today.

Senator NELSON. OK. Any further comments?

Yes, sir, Mr. Citron?

Mr. CITRON. Yes, I'd like to just add to that. Like Time Warner, Vonage also offers a device that allows for the use of a regular telephone, and very similarly, as such. But also, as Kevin pointed out earlier, there are a number of different kinds of devices and applications, since voice over IP is just a software program, that could really benefit people, whether it be elderly or disabled, and we're obviously working on those products today. Whether they be WIFI phones that people can carry around with themselves, or whether they be video phones that'll be coming out later this year, they could really improve people's ability to communicate, both, again, for seniors, for people with disabilities, or just for regular people, like you and I.

Senator NELSON. Did you say that presently there are, nationwide, maybe a couple of hundred thousand that are connected?

Mr. CITRON. That is correct.

Senator NELSON. Say, in 5 years, how many will be connected?

Mr. CITRON. I think that's a very hard number to project forward. I think a lot of it has to do with what this Committee is going to take up in the area of regulation. Should you allow for regulatory certainty that allows for us to develop this industry, you could have millions of people using the service within a few years. Should you stifle our growth by imposing a myriad of layers of regulation on our industry, the industry will suffer, slow, and probably die.

Senator NELSON. You said that there are three million users in Japan?

Mr. WERBACH. That was mine. There are three million Japanese customers who have voice over broadband service, which is a similar kind of service to what Vonage offers, yes.

Senator NELSON. Why so few?

Mr. WERBACH. Why so few? That's—

Senator NELSON. In Japan.

Mr. WERBACH. I think that's a lot, and it's growing very rapidly. That's people that are using voice over IP as their primary phone service. And I would add—again, this is just talking about voice over broadband service. There have been, I believe, six or ten million downloads of SCIP, which is a piece of software that you can download to make voice calls through your computer. And there have been tens of millions of downloads of instant messaging service, like AOL Instant Messenger and Yahoo! Messenger, most of which now have voice chat capabilities.

Senator NELSON. We want to thank you all. I have long looked to be the Chairman of the Commerce Committee.

[Laughter.]

Senator NELSON. If I had my druthers, we'd just keep going on.

[Laughter.]

Senator NELSON. But thank you all for being here. The meeting is adjourned.
[Whereupon, at 12:06 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF HON. ERNEST F. HOLLINGS,
U.S. SENATOR FROM SOUTH CAROLINA

Thank you, Mr. Chairman. Today's hearing allows our committee to consider how advances in technology—more specifically “voice-over-internet-protocol” technology—are affecting the communications marketplace and our regulation of this industry. While some international and long distance companies have used “packet-switching” technology in parts of their conventional telephone networks for some time, the slow, but steady growth of broadband technology is fueling the development of a new wave of voice, video and data applications that will give broadband subscribers greater control over how they communicate.

But the promise of this technology does not come without significant challenges for policymakers and regulators. In particular, in a world where voice services are no longer intrinsically tied to the network provider, the growth of VoIP communications services will pressure existing regulatory schemes that assure universal service availability in rural, insular, and high-cost regions; provide consumers with effective 911 emergency assistance; and ensure that law enforcement personnel can access the conversations of criminals and terrorists, to name just a few. Moreover, the promise of greater competition may not materialize if adequate safeguards are not created to prevent dominant network owners from disadvantaging non-network VoIP providers.

Without question, these are important issues that deserve careful, up-front consideration. In addition, we should be wary of adopting a “shoot first, ask questions later” approach to regulation that emphasizes deregulatory ideology over sound judgment. Such an approach may be an effective way to make headlines, but it is not conducive to making headway toward resolving these difficult issues.

Mr. Chairman, it is time to roll up our sleeves and get to work. Pending efforts to rationalize inter-carrier compensation and to improve our contribution mechanism for universal service should be released from regulatory limbo in order to provide us with a clearer picture of how VoIP services will contribute to the support of a ubiquitous communications network. In addition, we should consider what social obligations—such as 911 service, access for persons with disabilities, and others—will demand regulatory intervention and what goals can be met through industry consensus.

In a nutshell, Mr. Chairman, the future is not yet written. VoIP services have the potential to revolutionize communications and provide consumers with yet undiscovered benefits. However, we must not let such promise blind us to the need for rules that will assure basic consumer protections, the wide availability of communications infrastructure, and a competitive marketplace.

I look forward to the testimony of the witnesses and to their answers to our questions.

PREPARED STATEMENT OF HON. DANIEL K. INOUE, U.S. SENATOR FROM HAWAII

I would like to thank the Chairman for holding this important hearing on what I believe will be one of the most critical telecommunications issues facing this Committee over the next several years—how the government should regulate in the broadband age. Like Senator Stevens, I believe that the world of communications has changed dramatically since passage of the 1996 Telecommunications Act. In telecommunications technology terms eight years is a lifetime. Therefore, it is appropriate that this Committee take a hard look at developments in the communications marketplace to ensure that the law keeps pace with the rapidly advancing technology.

As technology improvements permit consumers to receive voice, data and video capability over a single Internet protocol (IP) transmission line, new regulatory issues arise. I welcome these new technologies and support their deployment, but would

caution our regulators against being so overawed by the promise of technology that they desert the core social and national security principles such as universal service, E911, access for persons with disabilities, and assistance for law enforcement that have made the U.S. communications network the most robust and reliable in the world.

Voice over Internet Protocol (VoIP) may change the way Americans communicate, but it will not change consumer expectations. Regardless which technology powers their telephone service, consumers expect to reach a public safety operator when they dial 911. When there is an electricity black-out, consumers expect their phones to work. These and other capabilities, however, are not easily implemented in the new VoIP world. Should these consumer protections be preserved through regulation or should the marketplace determine their future? History has demonstrated that voluntary commitments and market forces are not adequate to guarantee such goals.

Congress has given the FCC the tools to foster the development of new technologies and services and also to safeguard our core social and national security objectives. Under the 1996 Act, the FCC may forbear from applying any regulation or statutory requirement to telecommunications services or carriers. Utilizing forbearance authority rather than reclassifying services to avoid regulatory requirements, may be the more prudent approach.

Finally, while the primary reason for our hearing today is to discuss the regulatory landscape for VoIP services, it is important to recognize that an FCC decision reclassifying VoIP services as an information service could have ramifications beyond communications policy. In addition, to the social and national security concerns that I have raised, such a decision could prohibit State and local governments from collecting taxes on VoIP services. I would submit that it is an odd result to have FCC regulatory decisions affect tax policy, but this is what we have unwittingly done in the Internet Tax Freedom Act by preserving state and local taxes on “telecommunications services” *as that term is interpreted by the FCC*.

I hope that the haze of deregulatory fever will not cloud our better judgment. I look forward to the testimony of the witnesses.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ERNEST F. HOLLINGS TO
HON. MICHAEL K. POWELL

Question 1. In filings before the FCC, law enforcement personnel have expressed concern that FCC’s efforts to classify broadband and VoIP services as “information services” might excuse providers of these services from any obligations under CALEA. If VoIP services are classified as “information services,” will VoIP providers have any CALEA obligations?

Answer. The FCC recognizes the critical importance to homeland security and law enforcement that VoIP services be accessible for properly authorized wiretaps. The FCC has committed to an expedited rulemaking proceeding on the CALEA obligations of IP-enabled service and broadband platform providers, addressing CALEA issues on a separate track from the issues raised in the broader IP-Enabled Services rulemaking. The Department of Justice, Federal Bureau of Investigation and the Drug Enforcement Administration filed a petition for rulemaking on March 10 identifying a number of issues that are in need of resolution to implement CALEA for broadband services. The Commission issued a Public Notice on March 12, 2004 inviting public comment on the petition. The petition argues that CALEA’s definitions of “information services” and “telecommunications carrier” can and should be applied differently from the similar definitions in the Communications Act to address law enforcement’s requirements. The Commission plans to initiate a rulemaking proceeding to address the matters raised in the petition soon after comments are filed.

Question 2. Given the importance of making emergency communications available to all consumers regardless of the particular technology used, how can the FCC ensure that those on the front lines of providing emergency services—states and localities—can get the location information they need from communications providers to render emergency aid. Given our experience with wireless carriers, do you have any confidence that “voluntary measures” and the absence of functional obligations will be sufficient?

Answer. The FCC sees an opportunity for first responders to benefit from the strength and flexibility of IP-based services. In our IP-Enabled Services rulemaking, we specifically ask questions about E911, including whether the Commission should mandate certain capabilities. On March 18, 2004 the FCC held a Solutions Summit on precisely this topic and heard from our colleagues in state and local governments,

the National Emergency Number Association, VoIP industry leaders, wireline and wireless industry representatives, equipment manufacturers, and scholars. We heard from them not only how E911 can be expanded to VoIP services, but also how the use of IP can expand the capabilities of E911 beyond providing “just” location information. While we are encouraged by the voluntary steps that have been taken so far, we will examine this question very closely in the IP-Enabled Services rulemaking to ensure that American consumers benefit from the capabilities of these new and powerful networks.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BYRON DORGAN TO
HON. MICHAEL K. POWELL

Question 1. The current intercarrier compensation regime encourages arbitrage as providers seek to pay the lowest rates possible. Certainly this is understandable, but doesn't this call for attention by the FCC? What is your plan to address the intercarrier compensation regime while ensuring that local exchange carriers are compensated for the use of their networks?

Answer. The Commission currently is engaged in a rulemaking proceeding for the purpose of reexamining the existing patchwork of intercarrier compensation regulations. The *Inter-carrier Compensation* rulemaking was initiated with the express purpose of developing a unified intercarrier compensation regime to eliminate arbitrage incentives. In the *Inter-carrier Compensation* rulemaking proceeding, the Commission is taking a fresh look at the costs associated with the use of local networks, and the possibility of a new approach to intercarrier compensation that is more consistent with how these costs are incurred today, as well as the pro-competitive and deregulatory goals of the 1996 Act. Currently, Commission staff is working diligently to develop long-term solutions to issues arising under the current regime. At the same time, industry groups are meeting separately to develop possible proposals for consideration by the Commission. There are challenges associated with developing a unified and sustainable regime. I remain hopeful, however, that the industry will assist the Commission in formulating a new approach—one that will address issues raised by existing regulations and one that is designed for a market with increasing competition and new technologies.

Question 2. Landline, wireless, and cable voice service providers pay access charges to terminate voice calls on a competing provider's network. Do you see a day when this is not the case? And if so, how do you envision rural carriers recovering their costs? Why shouldn't VoIP providers pay access charges for the cost they impose on a competing voice provider's network in terminating a voice call? *i.e.*, who will pay for the network?

Answer. The Commission is considering a number of proposals in the *Inter-carrier Compensation* rulemaking proceeding, including a bill-and-keep approach to intercarrier compensation. Under this approach, neither of the interconnecting networks charges the other network for terminating traffic that originates on the other party's network. Rather, each network recovers from its own end users the cost of both originating traffic delivered to the other network, and terminating traffic received from the other network. Some carriers, particularly rural carriers, have expressed concern that recovering costs from end users rather than other carriers might lead to unaffordable end-user rates in rural areas. I want to assure you that the Commission is sensitive to the needs of rural carriers and the need to maintain affordable rates in rural areas. There will be a universal service component to any plan we adopt to ensure that carriers can recover their costs without threatening affordability.

The Commission currently is considering the question of whether VoIP providers should pay access charges in the *IP-Enabled Services* rulemaking proceeding. As a policy matter, the Commission believes that any service provider that sends traffic to the public switched telephone network should be subject to similar compensation obligations, irrespective of whether the traffic originates on the public switched telephone network, on an IP network, or on a cable network. We maintain that the cost of the network should be borne equitably among those that use it in similar ways.

Question 3. Are the current definitions and regulatory scheme of the 1996 Act sufficient to deal with changing technologies and preserving necessary universal service and other support mechanisms?

Answer. The current definitions were created at a time when the telecommunications landscape looked very different. As the communications marketplace evolves, it may become increasingly difficult to classify services as either telecommunications or information services. The distinction between telecommunications and information services is particularly meaningful in the context of universal service, because

the statutory categorization of services can affect whether something may be supported by universal service, as well as whether the service may be subject to universal service assessments.

In recognition of these challenges, the state members of the Federal-State Joint Board presented to Senator Burns possible modifications to section 254(d) that would allow the Commission to assess universal service contributions on intrastate and interstate telecommunications revenues. Others have proposed modifications to section 254(d) that would make clear that the Commission has authority to adopt alternative connection- or numbers-based contribution methodologies.

Question 4. Do you believe that rural areas are equipped with the broadband facilities to move forward with VoIP like other areas in the country? If not, won't further draining universal service or access charges by exempting VoIP just make rural areas lag even more behind?

Answer. As discussed in more detail in response to Senator Boxer's third question, it does not appear that people in rural areas are receiving unreasonable or untimely access to broadband services compared to people in urban areas. Through its section 706 inquiries, the Commission has found that advanced telecommunications capabilities are being deployed throughout the Nation on a reasonable and timely basis. Although carriers in rural areas may face challenges to deployment, such as long loop lengths and sparsely populated areas, many have already developed strategies to overcome those challenges.

Question 5. VoIP, while advanced technology, is still a telephone call. Why should this form of voice communication be treated differently than voice communications over wireless, cable or the traditional landline? Won't treating VoIP differently just encourage the type of regulatory arbitrage that is the subject of concern in the inter-carrier compensation regime?

Answer. It is important to distinguish between regulation that is applied to telephone calls because they are telephone calls, on the one hand, and regulation that is applied in response to some specific characteristic of the telephone network, on the other. I agree that there are various "social policy" regulations that we must consider in the context of VoIP precisely because VoIP calls resemble traditional calls. For example, the Commission—or the Congress—may well determine that VoIP providers must render their offerings accessible by people with disabilities, or must establish means by which subscribers can dial 911 and receive emergency assistance, or must pay into universal service mechanisms, or must ensure access to law enforcement for authorized wiretapping purposes. However, a great deal of the economic regulations that are applied to traditional telephony—including, for example, tariffing requirements, market entry prohibitions, and constraints on rates—were designed to counter the monopoly power of a single provider that owned the only facility that could be used to provide service. This rationale is not applicable to the VoIP market, which is quite competitive. First, there is competition in the market for the broadband access services used to facilitate VoIP calls: wireline broadband providers currently compete with cable-based providers, and in the near future, both will likely compete with wireless providers, satellite providers, and maybe even providers of broadband over power lines. Second, there is competition in the market for VoIP applications, as both facilities owners and companies that own no facilities at all have begun to offer VoIP service. In this competitive environment, I believe that traditional economic regulations are not appropriately applied to VoIP, because the rationale supporting their application with regard to other services is absent.

As you note, we must work to minimize opportunities for regulatory arbitrage and ensure that the customers, not regulators, determine which offerings will succeed and which will not. Thus, for example, in the Notice of Proposed Rulemaking that we recently issued regarding VoIP, the Commission made clear its view that any service provider that sends traffic to the PSTN should be subject to similar compensation obligations, irrespective of whether the traffic originates on the PSTN, on an IP network, or on a cable network.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO
HON. MICHAEL K. POWELL

Question 1. You testified that VoIP is an application like e-mail or any other content that flows over the Internet. Would you agree, and is it relevant, that VoIP or broadband phone service is the first Internet application that is a near-perfect substitute for a telephone call?

Answer. I expect that as the quality of service offered by VoIP products improves, those products will increasingly be viewed as substitutes for traditional telephony.

Even now, VoIP providers are competing with traditional carriers in both the residential and enterprise markets. That substitutability is relevant in some important ways. For example, as end users replace traditional wireline telephone services with VoIP service, we will increasingly face questions regarding how to pursue various important public policies, including those ensuring access to emergency services, disability accessibility, appropriate carrier compensation, and universal service. I should emphasize, though, that the fact that VoIP may represent a substitute for traditional telephony is not relevant to questions concerning certain other types of regulation, particularly economic regulation. These regulations—including, for example, tariffing requirements, market entry prohibitions, and constraints on rates—were designed to counter the monopoly power of a single provider that owned the only facility that could be used to provide service. But VoIP services are offered by numerous providers and may be accessed over a variety of broadband platforms. This multiplicity of platforms and providers ensures vibrant competition and destroys the rationale for economic regulation. In short, VoIP's substitutability to traditional telephony may justify application of certain "social policy" requirements, but it does not justify the application of regulations designed for monopoly conditions that are not present in this market.

Question 2. In your testimony, you assert that VoIP providers have been able to offer lower prices because of greater efficiency and lower entry and transaction costs. But right now, the VoIP providers enjoy some cost advantages because they do not pay access charges and they do not pay either state or Federal universal service charges?

(a) If they had to pay the same fees as traditional telecom competitors, how much cheaper would their products be?

Answer. In the *IP-Enabled Services* rulemaking proceeding, the Commission currently is examining whether VoIP providers should be subject to the same access charges currently paid by traditional interexchange carriers, or if VoIP providers should pay some other charge for use of the public switched telephone network. Even if VoIP providers are required to pay the same access charges as traditional telecommunications competitors, however, there are still cost benefits and efficiencies available through VoIP that traditional circuit-switched telecommunications competitors cannot provide. VoIP calls are packetized and routed over a single data network along with other types of packets, which may be carrying data, voice, or video. The traditional circuit-switched network requires two separate networks—one to route the voice portion of a call and another to transmit the routing data for each call. There are cost savings associated with utilizing only one, as opposed to two, networks to send and receive voice calls. Furthermore, VoIP applications offer consumers increased functionality that is not available through traditional circuit-switched telephony. For example, VoIP providers can consolidate consumers' messages from various sources, such as wireline phones, faxes, pagers, e-mails, and wireless phones, into one location, allowing consumers to save time in checking one place for messages. Use of VoIP technology also makes office moves by employees very easy to accomplish, saving companies time and resources. Therefore, even if VoIP services pay the same access charges as traditional telecom competitors, there are cost benefits and efficiencies associated with using VoIP.

Although VoIP providers do not make direct contributions to universal service, they are considered end users for universal service contribution purposes. Thus, entities providing interstate telecommunications or telecommunications services to VoIP providers are subject to universal service contributions and may pass through those contributions to the VoIP providers. The universal service contribution factor for first quarter 2004 is 8.7 percent. The proposed contribution factor for second quarter 2004 is also 8.7 percent.

(b) Do you believe that VoIP phone service providers should have a competitive advantage over traditional telephone service providers because they do not have to pay into programs like Universal Service?

Answer. Section 254(d) of the Act sets forth the Commission's authority to assess Federal universal service contributions. Section 254(d) requires all telecommunications carriers that provide interstate telecommunications services to contribute to universal service. The section authorizes the Commission to require providers of interstate telecommunications to contribute, if it would serve the public interest. If an entity is neither a telecommunications carrier nor provider of telecommunications, the Commission cannot require that entity to contribute to universal service.

The Commission recently sought comment on the regulatory classification of IP-enabled services, including VoIP services. In that Notice of Proposed Rulemaking, the Commission also sought comment on the universal service contribution obliga-

tions of IP-enabled service providers. Comments and reply comments are due 60 and 90 days, respectively, after the item's publication in the Federal Register.

Question 3. As traditional voice service migrates to VoIP services there is a concern about how states will continue their role (as under section 254 of the Act) to fund universal service at the state level if VoIP services are exempt from state jurisdiction. As I understand it, states now can only assess INTRASTATE services to fund their own programs. Right now, California provides almost \$1 billion in universal service support, which is critical to serve low-income customers, deaf and disabled customers, and customers in rural hospitals. According to state experts, in four years, up to half of the current revenue base for these programs will have migrated to VoIP services.

(a) Are you aware of this situation and is it a problem in other states?

Answer. Over the past several years, trends in the telecommunications marketplace have led to decreases in the Federal universal service contribution base—interstate end-user telecommunications revenues. Specifically, telecommunications carriers have increasingly begun to bundle interstate and intrastate telecommunications services and telecommunications and information services, which makes the identification of interstate telecommunications revenues difficult. In addition, traditional voice services are migrating to new technologies, which may not be subject to universal service assessments. Accordingly, the Commission has initiated a proceeding to consider whether to adopt an alternative contribution methodology.

If states utilize an intrastate telecommunications revenues methodology, these marketplace trends would likewise affect the ability of states to fund their own universal service programs.

(b) Do you acknowledge that the beneficiaries of universal service programs—the poor and residents of rural communities—are those least likely to have access or service, incapable of benefitting from VoIP efficiencies and lower costs? Does this cause you any concern?

Answer. It does not appear that people—rich or poor—in rural areas are receiving unreasonable or untimely access to broadband services compared to people in urban areas. Indeed, at the Commission we have initiated a number of forums and proceeding to encourage not only wireline broadband, but also broadband via wireless technologies, satellites, and broadband over powerlines, often focusing on ensuring deployment to underserved areas.

Pursuant to section 706 of the Act, the Commission conducts regular inquiries to determine if advanced telecommunications capabilities are being deployed throughout the Nation on a reasonable and timely basis. To date, the Commission has released three section 706 reports and has concluded that deployment of advanced telecommunications capabilities has been reasonable and timely. According to the Commission's data, as of June 30, 2003, there is at least one subscriber of high-speed services in 91 percent of the Nation's zip codes.

In addition, the National Exchange Carrier Association (NECA) recently published a study that concluded that technological advances among small, mostly rural local telephone companies between 2001 and 2003 were greater than expected. According to this 2003 study, 78.95 percent of member companies' access lines now are equipped for DSL. NECA concluded that rural telephone companies are meeting the growing consumer demand for advanced services in spite of the hurdles they must overcome, including the lack of economies of scale that large, non-rural companies are afforded.

(c) How do you recommend the state make up the shortfall in funds lost of VoIP in state universal service programs?

Answer. States that have intrastate revenue-based assessment systems may wish to consider the alternative contribution assessments methodologies being reviewed by the Commission. For example, the Commission is currently considering three connection-based methodologies: (1) a connection-based system that assesses residential connections to public networks a flat charge and multi-line business connections the residual finding requirement on the basis of capacity; (2) a connection-based system that assesses all connections on the basis of capacity and splits the charge between access and transport providers; and (3) a system that assesses all assigned telephone numbers.

Question 4. On page 12 of your testimony, you say that an Internet voice system can "make it easier to pinpoint the specific location of the caller in a large building" for 911 purposes. Are there technologies now available that make it possible to tell the origin of a Voice over IP call?

Answer. To our knowledge, technologies that pinpoint the origin of a VoIP call are not currently in widespread use. However, IP-based communications, by their nature, are capable of transmitting a great deal of information completely independent

of the content of the communication itself. Thus, in cases where a phone (or other equipment used to make a call) is stationary, it seems very likely that a system could be designed to transmit the caller's precise location along with the caller's voice communication.

Certainly, many VoIP offerings are "mobile" in the sense that users can access their accounts wherever they can access the underlying network. Those systems, of course, present a different set of issues, which the Commission is now working to resolve. The Commission recently held a "solutions summit" at which government and industry experts convened to discuss E911 issues relating to VoIP. Moreover, in its current rulemaking proceeding regarding VoIP, the Commission has expressly sought comment from the public regarding the state of geolocation and other technologies that might be utilized to pinpoint a user's location.

Question 5. You stated in your testimony that, "We have championed the deployment of multiple broadband networks in order to rid ourselves of the intractable last mile problem. We have pushed for greater deployment of DSL, cable modem, 3G wireless, Wi-fi, Ultra Wide Band, satellites and broadband over power lines, just to name a few new services already in commercial use."

(a) How many small businesses in California and the U.S. have a choice between more than one provider of broadband service? More than two? More than three?

(b) How many homes in California and America have access to at least a single broadband provider and how many homes have a choice between more than one provider of broadband service? More than two? More than three?

Answer. Facilities-based broadband providers report to the FCC that they were providing 20.6 million high-speed connections to residences and small businesses (considered as a single category) in the United States as of June 30, 2003, and 3.0 million in California. (Industry Analysis and Technology Division, Wireline Competition Bureau, FCC, *High-Speed Services for Internet Access: Status as of June 30, 2003*, at Table 11 (Dec. 2003).) As defined by the Commission's data collection program, this group consists of all consumers of broadband services that are primarily designed for, and marketed to, residential consumers. (Broadband service provider may offer several services that are distinguished by price, "download" and/or "upload" speeds, and other features such as number of e-mailboxes.) Consistent with industry advertising and record-keeping practices, the data reported to the FCC do not separately identify the number of small business and residential broadband service subscribers, or where they are separately located.

The number of broadband service choices that are available depends to some extent on location. (Satellite-based broadband service is available to any location that has a sufficiently unobstructed south-facing view.) In reports to the FCC, wired and wireless facilities-based broadband providers identify those Zip Codes in which they have at least one subscriber for their broadband service(s). As of June 30, 2003, more than one facilities-based broadband provider reported having at least one subscriber in 75 percent of U.S. Zip Codes, and in 91 percent of California Zip Codes. For more than two broadband providers, the comparable figures as 58 percent and 80 percent, respectively. For more than three broadband providers, the figures are 44 percent and 69 percent, respectively. (See *Id.*, at Table 13.) While not all areas within a Zip Code necessarily have access to any or all of the broadband services that are available somewhere in that Zip Code, the presence of subscribers indicates some level of broadband service deployment in the Zip Code.

(c) Do you believe that regulation will remain necessary in markets with only one or two broadband service providers? Should the fact that different technologies offering different capabilities at different prices be considered as well?

Answer. To date, there appears to be little evidence that a broadband provider will charge higher prices in markets without competition than it does in markets with competition. For example, a survey of cable modem prices across markets found that cable modem providers charged the same monthly access fee regardless of whether they faced competition from DSL providers in a given market. Thus, at the present time, it does not appear that regulation is necessary to curb excessive broadband access rates. Moreover, the number of markets with only one or two broadband providers is rapidly diminishing with the advent of broadband platforms other than cable and DSL. Even in rural areas, for example, subscribers increasingly have access to broadband via satellite.

Differences in the capabilities and prices associated with different broadband access technologies do not appear to raise anticompetitive concerns at this time. While it was generally believed that cable modem service would offer faster access than DSL and other technologies when those services were first rolled out, we now know that numerous technologies are capable of offering extremely high bandwidth. Broadband access providers have begun offering different pricing packages according

to how much bandwidth (and speed) a customer desires. These arrangements appear to offer competitive prices and to provide consumers with real choice in the broadband access market.



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